

WILLAMETTE LAW REVIEW



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OREGON EVIDENCE CODE *Commentary & Analysis*

Justice Robert E. Jones
William V. Deatherage

Leroy J. Tornquist
Wayne T. Westling

THE CRY OF RAPE: THE PROMPT COMPLAINT DOCTRINE
AND THE FEDERAL RULES OF EVIDENCE
Michael H. Graham

UNCODIFIED FEDERAL EVIDENCE RULES APPLICABLE TO CIVIL TRIALS
David J. Langum

THE ADMISSIBILITY OF NOVEL SCIENTIFIC EVIDENCE
IN THE NINTH CIRCUIT
Ronald S. Matthias

WHEN DEATH IS THE ISSUE: USES OF PATHOLOGICAL
TESTIMONY AND AUTOPSY REPORTS AT TRIAL
J. Thomas Sullivan

THE EMERGING DUE DILIGENCE STANDARD FOR FILING
DELAYED NOTICE OF APPEAL IN FEDERAL COURTS
Benjamin Calkins

THE ADMISSIBILITY OF NOVEL SCIENTIFIC EVIDENCE IN THE NINTH CIRCUIT

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TABLE OF CONTENTS

INTRODUCTION	534
I. COMMITMENT TO THE <i>Frye</i> STANDARD.....	536
A. <i>Invoking the Frye Standard: The Early Case Law</i> ..	536
1. <i>Polygraphic Evidence</i>	538
2. <i>Other Scientific Evidence</i>	542
B. <i>Retaining the Frye Standard</i>	545
1. <i>Silent Construction of the Federal Rules of Evidence</i>	545
2. <i>Recent Applications</i>	547
C. <i>Summary: The "Elements" of the Frye Standard</i> ...	552
1. <i>What Must Be Accepted?—"The thing from which the deduction is made"</i>	553
2. <i>By Whom Must It Be Accepted?—"The particular field in which it belongs"</i>	553
3. <i>Establishing "General Acceptance"</i>	555
II. AVOIDANCE OF THE <i>Frye</i> STANDARD: HYPNOTICALLY INDUCED RECOLLECTION	555
A. <i>Overview: The Cases</i>	555
B. <i>The Basis for Avoidance: "Refreshing Recollection"</i> ..	560
C. <i>The Supportive Case Law</i>	563
D. <i>The Newer Trends</i>	564
1. <i>The Safeguard Approach</i>	565
2. <i>The "Incompetence" Approach</i>	568
3. <i>The Compromise Approach</i>	572
III. RECOMMITMENT TO THE <i>Frye</i> STANDARD AND THE FUTURE OF HYPNOTICALLY INDUCED TESTIMONY	576
CONCLUSION	578

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INTRODUCTION

Recent technological and scientific developments have radically expanded the range of data and techniques available in nearly every field of human endeavor.¹ Few would argue that our legal system should not partake of the fruits borne of this productive era, if those fruits can effectively advance the search for truth.² Thus, more than ever before, courts are being asked to rule on the admissibility of various forms of scientific evidence.³

Despite the many exciting breakthroughs of recent years, not everything that emerges from a laboratory is necessarily reliable.⁴ Yet the mere admission of something into evidence lends to it at least some aura of respectability. Thus, courts—charged with the task of ensuring that legal proceedings are conducted fairly, without undue delay, and in an atmosphere that is free of prejudice and confusion—have sought to guard against the improvident admission of questionable “scientific” evidence.

Reliability has become the threshold requirement for the admission of scientific evidence. Traditionally, the courts have deferred to the community of scientific experts for this determination. The seminal expression of this principle is found in *United States v. Frye*: “[W]hile courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.”⁵

1. T. WILLIAM, A SHORT HISTORY OF TWENTIETH CENTURY TECHNOLOGY 1-21 (1982). This trend, of course, will continue, most likely at an ever increasing pace. NATIONAL RESEARCH COUNCIL, OUTLOOK FOR SCIENCE AND TECHNOLOGY: THE NEXT FIVE YEARS 1-3 (1982).

2. See, e.g., *People v. McInnis*, 6 Cal. 3d 821, 826-27, 494 P.2d 690, 693, 100 Cal. Rptr. 618, 621 (dicta) (“Modern and scientific investigation techniques are to be encouraged.”) (citing *Simmons v. United States*, 390 U.S. 377 (1968); *People v. Graves*, 64 Cal. 2d 208, 411 P.2d 114, 49 Cal. Rptr. 386 (1966)), cert. denied, 409 U.S. 1061 (1972).

3. NATIONAL CENTER FOR STATE COURTS REPORT, STUDY TO INVESTIGATE USE OF SCIENTIFIC EVIDENCE, Vol. 7, No. 8 (Aug. 1980) cited in Imwinkelried, *A New Era in the Evolution of Scientific Evidence—A Primer On Evaluating the Weight of Scientific Evidence*, 23 WM. & MARY L. REV. 261, 261 (1981).

4. See Imwinkelried, *supra* note 3, at 267-68; Thornton, *Uses and Abuses of Forensic Science*, 69 A.B.A. J. 289, 289 (1983). See generally J. RAVETZ, SCIENTIFIC KNOWLEDGE AND ITS SOCIAL PROBLEMS 333-35 (1979).

5. 293 F. 1013, 1014 (D.C. Cir. 1923). “The *Frye* test . . . remains the basic and primary test upon which courts often rely either to admit or reject testimony based on the results of novel techniques.” A. MOENSSENS & F. INBAU, SCIENTIFIC EVIDENCE IN CRIMINAL CASES 6 (2d ed. 1978) (footnote omitted). Other tests have been suggested, but these have received little

This Article examines the admissibility of novel scientific evidence in the Ninth Circuit and the extent of that court's commitment to the *Frye* standard. Until recently, that commitment could not have been seriously questioned, for notwithstanding the usual difficulties associated with applying the *Frye* standard, the Ninth Circuit routinely invoked it when determining the admissibility of novel scientific evidence.

Part I of this Article chronicles this commitment. Specifically, Parts I-A and I-B trace the development of the *Frye* standard since 1956, the year it was adopted in the Ninth Circuit. Part I-C focuses on the Ninth Circuit's resolution of certain questions raised by the invocation of the *Frye* standard. What must be accepted? Who must accept it? How is acceptance established? By its review of the Ninth Circuit's treatment of these issues, this portion of the Article suggests a rough model by which the admissibility of novel scientific evidence likely will be determined in the future.

Part II examines the recent—and only significant—context in which the Ninth Circuit avoided applying the *Frye* standard: With-

endorsement among the courts: (1) The most frequently discussed alternative is McCormick's "relevancy" approach. MCCORMICK'S HANDBOOK OF THE LAW OF EVIDENCE 491 (E. Cleary, 2d ed. 1972) [hereinafter cited as MCCORMICK] ("Any relevant conclusions which are supported by a qualified expert witness should be received unless there are other reasons for exclusion."), see also *Coppolino v. State*, 223 So. 2d 68 (Fla. Dist. Ct. App.), *appeal dismissed*, 234 So. 2d 120 (Fla. 1969), *cert. denied*, 399 U.S. 927 (1970). For a particularly forceful—and refined—exposition of this view, see (Mark) McCormick, *Scientific Evidence: Defining a New Approach to Admissibility*, 67 IOWA L. REV. 879 (1982). (2) Some commentators have recommended the establishment of expert panels or tribunals to assess and "certify" the reliability of novel scientific evidence, e.g., Note, *The Admissibility of Bite Mark Evidence*, 51 S. CAL. L. REV. 309, 331 (1978), but no such plans have ever been implemented; (3) One scholar has suggested that admissibility should be determined by adjusting the burden of proof: "The prosecution in a criminal case should be required to establish the validity of a novel scientific technique beyond a reasonable doubt. Civil litigants and criminal defendants, on the other hand, should establish the validity of a novel scientific technique by a preponderance of the evidence." Giannelli, *The Admissibility of Novel Scientific Evidence: Frye v. United States, a Half-Century Later*, 80 COLUM. L. REV. 1197, 1248 (1980); cf. Saltzburg, *Standards of Proof and Preliminary Questions of Fact*, 27 STAN. L. REV. 271 (1975).

For the most complete and informative overview of the *Frye* test, as applied, and all three alternatives, see Giannelli, *supra*. The author observes, "*Frye* may be tottering, but has not yet fallen." *Id.* at 1228. Another commentator has chronicled "the decline of the *Frye* test," Imwinkelried, *supra* note 3, at 265-67. The trend, if one exists at all, is hardly mounting. Giannelli, *supra*, at 1228 & n.233. While perhaps overstated, the recent observation of the Arizona Supreme Court may be more characteristic of the judicial response to the *Frye* standard: "*Frye* has been in use for almost 60 years without the development of any alternative as a general test of reliability. No such alternative has been seriously suggested in the cases or in the literature, nor does any occur to this court." *State ex. rel. Collins v. Superior Court*, 132 Ariz. 180, 196, 644 P.2d 1266, 1282 (1982).

out scrutinizing the extent to which relevant scientific communities have approved the use of hypnosis to assist a subject in recalling forgotten experiences, the Ninth Circuit has upheld the admissibility of testimony from witnesses whose recollections had been hypnotically "refreshed" before trial. The admissibility of this evidence has been analyzed somewhat differently by other courts: some condition admissibility on compliance with certain procedural safeguards during the pretrial hypnotic session; others have applied *Frye*, and found the testimony unreliable, excluding it entirely; still others have adopted a compromise position and rejected the testimony of previously hypnotized witnesses except to the extent that the testimony contains information the witness was able to recall and relate prior to hypnosis. These approaches are described and critiqued as well.

Despite the departure from the *Frye* standard evident in the hypnosis cases, there is little reason to suppose that further departures are imminent. Rather, it reasonably can be expected that the court will reaffirm its commitment to *Frye* and reconsider its approach to hypnotically induced testimony. Part III predicts which approach the court might adopt.

I. COMMITMENT TO THE *FRYE* STANDARD

A. *Invoking the Frye Standard: The Early Case Law*

More than thirty years elapsed after the United States Court of Appeals for the District of Columbia decided *Frye* before the Ninth Circuit Court of Appeals was presented with an opportunity to adopt or reject the "general acceptance" standard.⁶ In 1956, the court finally adopted the standard in *Lindsey v. United States*.⁷

6. In 1925, however, the Ninth Circuit Court of Appeals decided that certain witnesses could properly testify that certain seized bottles contained "Scotch or other liquor." *Landfield v. United States*, 9 F.2d 315, 316 (9th Cir. 1925). Apparently the method by which the witnesses determined that the bottles contained liquor was not objected to by the defendants; hence no *Frye* issue was presented, either because the method, if "scientific," was "generally accepted," or because the method was not "scientific." Rather, the defendants apparently challenged the *qualifications* of the witnesses. The court simply held that "[t]he witnesses appeared to be qualified to express their opinions." *Id.* If, as one might suspect, the witnesses made their determination after tasting or smelling the substance contained in the bottle, their testimony—under modern rules—would be admissible even if they were not experts. See, e.g., FED. R. EVID. 701, which states:

If the witness is not testifying as an expert, his testimony in the form of opinions or inferences is limited to those opinions or inferences which are (a) rationally based on the perception of the witness and (b) helpful to a clear understanding of his testimony or the determination of a fact in issue.

7. 237 F.2d 893 (9th Cir. 1956).

In *Lindsey*, the defendant stood accused of rape and sodomy.⁸ At trial, the district court received into evidence a recording of the complaining witness' earlier interview, conducted while the witness was under the influence of sodium pentothal, a "truth serum." The witness' statements were not hearsay; rather, the statements were introduced by the government on redirect in an effort to rehabilitate the complaining witness after she had been impeached by certain letters she had written in which she effectively retracted the allegations she had made against the defendant. The statements in the letters were inconsistent with her testimony at trial, but her statements during the sodium pentothal interview were consistent with her testimony and were admitted "to rebut any inference of impeachment." On appeal, the Court of Appeals for the Ninth Circuit held that the district court erred in admitting the recording of the interview. The circuit court noted that prior consistent statements are only admissible when it can be shown that the statements were made when the declarant had no motive to fabricate: "[O]nly then can such evidence be considered as having an element of trustworthiness."⁹ The court further noted that since the witness had been examined while under the influence of sodium pentothal to test the truthfulness of her earlier allegations against the defendant, the witness would have possessed the motive to repeat her allegations irrespective of their truth. Hence the theory underlying the use of sodium pentothal was called into question; only if sodium pentothal effectively suppressed the witness' will could she have had no motive to fabricate. On this issue, the court observed:

Whatever may be the value as an aid to psychiatric examination or otherwise, we cannot affirmatively say that the sodium-pentothal interview is generally vouched for by scientific authority and so entitled to judicial recognition, through having gained "general acceptance in the particular field in which it belongs," *Frye v. United States*, ' . . . as a trustworthy truth extracting procedure, which is reliably so in all cases.¹⁰

For nearly twenty years following its adoption of the *Frye* standard in *Lindsey*, the Ninth Circuit applied it with substantial evenness in cases involving novel scientific evidence.¹¹

8. The case arose in Alaska before it became a state. All criminal cases were then tried in federal district court.

9. 237 F.2d at 895.

10. *Id.* at 896 (emphasis added).

11. The decision in *Lindsey* has not escaped criticism. See McCORMICK 490 n.32.

1. Polygraphic Evidence

Having adopted the *Frye* test before having occasion to consider the admissibility of polygraph test results, the Ninth Circuit, of course, rejected the evidence when the occasion finally arose. In *United States v. Sadrzadeh*,¹² the court held, without citing any authority,¹³ that a criminal defendant's proffer of a lie detector test was properly rejected by the trial court.¹⁴ *Sadrzadeh* became the authority for the court's similar decision in *United States v. Salazar-Gaeta*.¹⁵

The basis for these early holdings was to a large extent clarified in *United States v. DeBetham*.¹⁶ In *DeBetham*, the defendant sought to introduce exculpatory polygraphic evidence. During a four-day preliminary hearing, the defendant presented "volume after volume of testimony" by experts from the fields of polygraphy, psychology, psychiatry and physiology, all "vigorously supporting" the accuracy of polygraphic evidence.¹⁷ The court observed that "[d]espite the strong showing made by defendant, we are not ready to say that the trial judge abused his discretion in rejecting the offer."¹⁸

Because the court cited *Frye* in support of its decision, its invocation of the "abuse of discretion" standard can only be regarded as an unfortunate contradiction—one frequently committed by other

12. 440 F.2d 389 (9th Cir.), cert. denied, 404 U.S. 850 (1971).

13. In what appears to be the Ninth Circuit's only prior discussion of the admissibility of lie detector evidence, the court held that under California law the results of polygraph tests are generally inadmissible, but will be admitted if both parties agree before trial that they could be admitted. *Herman v. Eagle Star Ins. Co.*, 396 F.2d 427 (9th Cir. 1968), aff'g 283 F. Supp. 33 (C.D. Cal. 1966). The plaintiff Herman had sought recovery from her insurer for the value of a lost piece of jewelry. The polygraph examiner apparently testified that in his opinion, the plaintiff was not being truthful when asked about her loss.

14. 440 F.2d at 390.

15. 447 F.2d 468, 469 (9th Cir. 1971). The court's discussion of polygraph evidence reads, in its entirety, as follows: "Finally, the exclusion of lie detector test results offered by appellant was not erroneous. *United States v. Sadrzadeh*, 440 F.2d 389 (9th Cir. 1971)." *Id.*

16. 470 F.2d 1367 (9th Cir. 1972), cert. denied, 412 U.S. 907 (1973).

17. *Id.* at 1368.

18. *Id.* (citing *United States v. Salazar-Gaeta*, 447 F.2d 468, 469 (9th Cir. 1971); *United States v. Sadrzadeh*, 440 F.2d 389, 390 (9th Cir. 1971); *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923)); accord, *United States v. Jenkins*, 470 F.2d 1061 (9th Cir. 1972), cert. denied, 411 U.S. 920 (1973). Indeed, on several subsequent occasions, the Ninth Circuit reaffirmed that polygraphic evidence is generally inadmissible. *United States v. Watts*, 502 F.2d 726, 728 (9th Cir. 1974) (citing *DeBetham*); *United States v. Bagsby*, 489 F.2d 725 (9th Cir. 1973); *United States v. Alvarez*, 472 F.2d 111, 113 (9th Cir. 1973), cert. denied, 412 U.S. 921 (1973) (citing *DeBetham*); *United States v. Salazar-Gaeta*, 447 F.2d 468, 469 (9th Cir. 1971).

courts¹⁹ and to be repeated by the Ninth Circuit.²⁰ Reviewing a trial judge's decision to admit novel scientific evidence only for abuse of discretion, thereby requiring no particular level of scientific acceptance, effectively ignores *Frye*. Determining admissibility by such a standard is indistinguishable from the mere "relevancy" approach, an approach advanced by some as an alternative to *Frye*.²¹ The abuse of discretion standard, of course, is the preferred standard for reviewing a trial court's determination of a closely related matter: whether a particular witness has been qualified as an expert.²² For that reason, the court might have seen some benefit (e.g., simplicity, uniformity) in employing that standard as it reviewed the admissibility of a novel scientific process itself. Nonetheless,

[d]eferred to a trial court in one instance does not justify deferring in another. As one court has observed correctly: "The answer to the question about the reliability of a scientific technique or process does not vary according to the circumstances of each case. It is, therefore, inappropriate to view this threshold question of reliability as a matter within each trial judge's individual discretion."²³

In closing the *DeBetham* decision, the court stated: "We do not hold that polygraphic evidence is never admissible."²⁴ Conceivably, the court was intimating that it was not undercutting its decision in *Herman v. Eagle Star Insurance Co.*,²⁵ that polygraph test results are admissible pursuant to stipulation. Alternatively, the court may have meant that it was not holding that polygraphic evidence will

19. *E.g.*, *People v. Marx*, 54 Cal. App. 3d 100, 109, 126 Cal. Rptr. 350, 355 (1975) (bitemark case).

20. *E.g.*, *United States v. Alvarez*, 472 F.2d 111, 113 (9th Cir. 1973), *cert. denied* 412 U.S. 921 (1973); *United States v. Marshall*, 526 F.2d 1349, 1360 (1975), *cert. denied* 426 U.S. 923 (1976). Indeed, in almost all Ninth Circuit polygraph cases, the court, though apparently relying on *Frye* and holding polygraphs inadmissible, also purported to review only for abuse of discretion.

21. See Giannelli, *supra* note 5, at 1222 & n.194. See generally *supra* note 5.

22. See *Mull v. United States*, 402 F.2d 571 (9th Cir.), *cert. denied*, 393 U.S. 1107 (1968); MCCORMICK 29-30.

23. Giannelli, *supra* note 5, at 1223 (citing *Reed v. State*, 283 Md. 374, 381, 391 A.2d 364, 367 (1978)). See also *Evidence, Annual Survey of South Carolina Law*, 32 S.C.L. REV. 119, 122-23 (1980) ("The admissibility of expert testimony is largely a matter of judicial discretion in South Carolina, as in most jurisdictions. The general rule, however, does not satisfactorily resolve the evidentiary problems raised when testimony is elicited from one who is an expert, but whose field of expertise is postulated on largely unsubstantiated theories that have been subject to considerable controversy." (footnotes omitted)).

24. 470 F.2d at 1368.

25. See *supra* note 13.

never be admissible; rather than being inherently defective, such evidence had not yet gained general scientific acceptance. The District Court for the Central District of California gave *DeBetham* the latter reading in *United States v. Urquidez*.²⁶

In *Urquidez*, a young woman was charged with selling heroin to a federal undercover narcotics agent. She admitted the sale, but raised the defense of entrapment. She testified that before the agent requested that she obtain heroin, he had sexual intercourse with her "to increase his attraction to her and thus make her more likely to accede to his request."²⁷ The agent denied the allegation.

Defendant's attorney, however, offered into evidence the results of a polygraph test that confirmed the truth of her testimony. The government, of course, opposed the introduction and advised the court that it could present expert testimony that the polygraph test did not confirm the truth of the defendant's testimony. The court observed:

In view of the nature of this rather novel and significant entrapment issue, the complete lack of evidence thereon, other than the contradictory testimony of the two individuals, and the fact that a jury had been waived, this court concluded that a favorable opportunity was presented to consider whether polygraphic evidence should properly be received in furtherance of resolving this evidentiary conflict. The court's willingness to consider such matters was enhanced by its awareness of the recent decision of the Court of Appeals in *United States v. DeBetham*. In that case, the refusal of the trial judge to receive evidence concerning a polygraphic test was affirmed as not being an abuse of discretion, and also because it appeared that the trial judge would not have believed the defendant irrespective of the polygraph test. However, the court expressly declined to hold that polygraphic evidence is "never admissible."²⁸

The court, after hearing three days of expert testimony concerning the intricacies of polygraphy and reviewing additional literature on polygraphs, concluded:

[While] it may well be that further developments and refinements in the utilization of the polygraph may some day merit its being accorded a place in a court proceeding, . . . experience of this case has amply shown that, as of now, the validity of a polygraphic test is dependent upon a large number of variable factors,

26. 356 F. Supp. 1363 (C.D. Cal. 1973).

27. *Id.* at 1364.

28. *Id.* (citation omitted).

many of which would be very difficult, and perhaps impossible, to assess. In a given case, the time required in order to explore and seek to adjudge such factors would be virtually incalculable (we did little more than make a beginning in the present case). Accordingly, this court is impelled to the conclusion that the administration of justice simply cannot tolerate the burden of litigation inherently involved in such a process.²⁹

Although the court in *Urquidez* did not mention *Frye*, its careful scrutiny of the scientific community's regard for polygraphs suggested an application of the "general acceptance" standard.

The *Frye* standard serves two distinct but related values: (1) general scientific acceptance provides a meaningful indication of reliability; and (2) it provides a judicially manageable standard by which to avoid collateral issues during trial. While the *Frye* standard requires the exclusion of some relevant evidence, it saves time—not arbitrarily or unjustly, but in a manner largely consonant with the principle that only reliable evidence should be admitted. In contrast, under the relevancy standard, almost all scientific evidence will be admissible. If only a single expert testifies that certain evidence is, in his view, reliable, that evidence will be deemed relevant, and thus, admissible. Because the extent to which the evidence is associated with theories or practices that are not generally accepted merely affects its weight, juries will be inundated with data that either tends to rebut or support the expert's conclusion.³⁰ Such data, the presentation of which will require some time, will often be beyond the ken of the average juror's understanding.³¹ Under *Frye*, however, the court, apprised of the consensus of the scientific community, can decide with dispatch whether to admit the evidence.

29. *Id.* at 1367. Among the variables identified by the court were: (1) The "motivation" of the subject: (a) the subject's concern about the seriousness of the offense and the consequences of his conviction, (b) the subject's belief in the effectiveness of the polygraph, (c) the subject's confidence as affected by his prior success or failure at "beating" the machine, (d) the subject's knowledge that adverse results could not be used against him in court; (2) the subject's physical and mental condition: (a) fatigue, (b) use of drugs, (c) intellect and the surprise element, (d) intentional control of the bodily responses measured by the polygraph; (3) the competence, integrity, attitude, and conduct of the operator: (a) communicating subjective beliefs of guilt or innocence to the subject, (b) confidence of subject in the operator, (c) the operator's tone, inflection, or expression; (4) the wording of questions; (5) the appropriateness of certain questions; and (6) the interpretation of the test results. *Id.* at 1366-67.

30. "Without the *Frye* test or something similar, the reliability of an experimental scientific technique is likely to become a central issue in each trial in which it is introduced, as long as there remains serious disagreement in the scientific community over its reliability." *Reed v. State*, 283 Md. 374, 388, 391 A.2d 364, 371 (1978).

31. *But see* Giannelli, *supra* note 5, at 1239-40.

"A new wrinkle,"³² on the admissibility of polygraphic evidence was presented in *United States v. Bagsby*. In that case, Newton, a government witness and former codefendant, took a polygraph test prior to defendants' trial. The results were inconclusive. Knowing this, defendants' attorney cross-examined Newton about the results of the session. "Counsel without laying a foundation, . . . cunningly asked . . . : 'Mr. Newton, with regard to your testimony in this case, isn't it a fact that recently you were unable to pass a lie detector test?'"³³ The trial court sustained the government's objection.

On appeal, the defense contended that the question was proper, not because the results of the test impeached Newton's veracity, but because the fact of his having taken the exam was relevant to his state of mind about deciding to testify [W]hether Newton passed or failed the examination becomes irrelevant. Instead, the mere taking of the examination itself is advanced for the purpose of attacking credibility by inferring therefrom a motive to testify falsely.³⁴

Without elaborating further,³⁵ the Ninth Circuit found that the trial court did not abuse its discretion in rejecting the polygraphic evidence.³⁶

2. Other Scientific Evidence

The Ninth Circuit, by upholding several trial courts' determinations that particular witnesses were qualified as experts, implicitly recognized that certain types of novel scientific testimony are admissible under *Frye*.³⁷ Thus, expert testimony concerning content anal-

32. *United States v. Bagsby*, 489 F.2d 725, 726 (9th Cir. 1973).

33. *Id.*

34. *Id.*

35. Perhaps the defense's argument was this: If Newton were otherwise undecided about whether to commit perjury, upon learning that the polygraph examiner was unable to reach a conclusion on the truth or falsity of the statements made during the examination, Newton might have grown more confident about lying at trial. If this were the defense's argument, whether Newton passed or failed *is* relevant, however. Because the test results were inconclusive, Newton might have grown confident with his belief that the examiner could not "contradict" (i.e., impeach) him at trial. But if the examiner were to conclude that Newton was speaking the truth, while he was actually lying, then Newton would grow even more confident. This argument presumes, however, that Newton incorrectly believed that the examiner would be permitted to "contradict" him if the examiner concluded he was lying, and bolster his testimony if the examiner concluded he was telling the truth. In any event, it is difficult to identify the relevance of Newton's having submitted to a polygraph test, apart from the results of that test.

36. 489 F.2d at 726.

37. See also *supra* note 6.

ysis of food,³⁸ ballistics,³⁹ and footprint identification⁴⁰ has been admitted.

Other novel scientific evidence, however, has been rejected. In *Wahrlich v. Arizona*,⁴¹ the defendant was convicted in state court of kidnapping. At his trial, he had offered to prove through expert psychiatric testimony that he was incapable of forming the specific intent to "hold or detain," an element of the crime. The Ninth Circuit affirmed the district court's denial of the petition, observing that federal courts should not unnecessarily interfere with state criminal proceedings and that courts should be reluctant "to constitutionalize rules of evidence."⁴² More significantly, however, the court acknowledged the *relevance*⁴³ of the psychiatric testimony, but affirmed the exclusion, in part, because the court was not convinced that "the state of the developing art of psychiatry is such that . . . psychiatric testimony directed to a retrospective analysis of the subtle gradations of specific intent has enough probative value to compel its admission."⁴⁴ *Frye* was not mentioned, but the court

38. *Lelles v. United States*, 241 F.2d 21 (9th Cir.), *cert. denied*, 353 U.S. 974, *reh'g denied*, 354 U.S. 944 (1957). In that case, the expert testified that based on their different contents, two samples of mushroom salt could not have been from the same stock. Although the appellant objected to the expert's testimony because it related to an "ultimate fact properly to be determined by the jury," *id.* at 26, the court undertook to observe "that the witness was an expert with specialized skill in chemistry . . . [W]e do not believe the trial court abused its discretion in permitting the witness to express his opinion based on many years of scientific analysis of food," *id.* Modernly, under the Federal Rules of Evidence, expert testimony may embrace an "ultimate issue." FED. R. EVID. 704.

39. *Ignacio v. Guam*, 413 F.2d 513 (9th Cir. 1969), *cert. denied*, 397 U.S. 943 (1970). In that case, the court held that the trial court was within its discretion to admit testimony of a ballistics "expert," who had worked for four years as a firearms examiner. *Id.* at 520.

40. *United States v. Powell*, 449 F.2d 335 (9th Cir. 1971). In that case, the court upheld the trial court's decision to allow a police officer, who observed defendant's boots ("which had some unusual characteristics") and impressions in mud, to testify that the tracks were made by the defendant's boots. The defendant objected to the officer's testimony, arguing that the officer "lacked sufficient training, to qualify him as an expert witness." *Id.* at 336. The court found no abuse of discretion in the trial court's acceptance of the officer's qualifications. *Id.* The most recent case in which the court implicitly acknowledged that particular evidence satisfies the *Frye* standard is *United States v. Haro-Espinosa*, 619 F.2d 789 (9th Cir. 1979) (drug analysis), a case decided well after the enactment of the Federal Rules of Evidence. See *infra* notes 54-67 and accompanying text.

41. 479 F.2d 1137 (9th Cir. 1973).

42. *Id.* at 1138.

43. *Id.* ("We do not admit all evidence that is competent and probative in a criminal trial. A wide assortment of relevant evidence is deliberately excluded by reason of counterbalancing factors that are believed to be of greater moment than the unfettered admission of relevant testimony.")

44. *Id.*

unequivocally held that mere relevance would not suffice to warrant the admission of novel scientific evidence.

Any lingering doubts about the vitality of the *Frye* standard in the Ninth Circuit were substantially resolved in *United States v. Amaral*.⁴⁵ In *Amaral*, the defendant, convicted of robbery, appealed the trial court's exclusion of expert testimony that would have impeached the testimony of several witnesses at the robbery scene who, at trial, were able to identify the defendant as the perpetrator. The defense's expert, a psychologist, was to testify on the effect of stress on perception and, in general, on the unreliability of eye-witness identification.⁴⁶

In significant detail, the Ninth Circuit explained the general standard governing the admissibility of evidence and how specific policy concerns occasionally affect that standard: all evidence must be probative (relevant) to be admitted⁴⁷ and experts can testify if their testimony would assist the trier of fact.⁴⁸ Even if testimony passes these threshold requirements, the court will exclude it if the introduction will "1) require undue consumption of time, 2) create a substantial danger of undue prejudice or of confusing the issues or of misleading the jury, 3) or unfairly and harmfully surprise a party who has not had a reasonable opportunity to anticipate the evidence submitted."⁴⁹ The court further noted, "Because of the peculiar risks of expert testimony, courts have imposed an additional test, i.e., that the testimony be in accordance with a generally accepted explanatory theory."⁵⁰ Finally, of course, the testifying witness must be qualified as an expert.⁵¹

Although the appellate court stated that its review of the district court's decision to exclude the psychologist's testimony must be undertaken with reference to these principles, it largely adopted the rationale of the trial court. Stating that "[o]ur legal system places primary reliance for the ascertainment of truth on the 'test of cross-examination'" and that "it is the responsibility of counsel during cross-examination to inquire into the witness' opportunity for obser-

45. 488 F.2d 1148 (9th Cir. 1973).

46. *Id.* at 1153 (citing district court).

47. *Id.* at 1152 (citing J. WIGMORE, 1 EVIDENCE IN TRIALS AT COMMON LAW §§ 9, 10 (3d ed. 1940)).

48. *Id.* (citing *Jenkins v. United States*, 307 F.2d 637 (D.C. Cir. 1962); 7 J. WIGMORE, *supra* note 47, § 1923).

49. *Id.*

50. *Id.* (citing *Frye*; accord *United States v. Stifel*, 433 F.2d 431 (6th Cir. 1970)).

51. *Id.* at 1153.

vation, his capacity for observation, his attention and interest and his distraction or division of attention," the court concluded that the trial court did not err.⁵² The appellate court expressly declined to decide "whether the proffered testimony was in accordance with a generally accepted theory explaining the mechanism of perception."⁵³ There can be little doubt that the court would have invoked the *Frye* standard had it needed to. In several subsequent cases the court needed to, and it did.

B. Retaining the *Frye* Standard

1. Silent Construction of the Federal Rules of Evidence

Most federal courts followed the *Frye* standard before the adoption of the Federal Rules.⁵⁴ Since the Federal Rules did not expressly codify the *Frye* standard, it is arguable that the rules repealed the *Frye* standard.⁵⁵ Some courts⁵⁶ and commentators⁵⁷ have

52. *Id.* The court also noted that the three witnesses who identified the defendant had observed the defendant from different locations and were under different conditions of stress at the time each observed the defendant. *Id.*

53. *Id.* at 1153-54. The court added, "[W]hile we see the dangers of admitting such testimony in terms of confusing the jurors and undue delays, we believe that our holding makes it unnecessary to analyze those dangers in detail." *Id.*

54. Giannelli, *supra* note 5, at 1229 & n.242 (citing *United States v. Alexander*, 526 F.2d 161, 163 & n.3 (9th Cir. 1975); *United States v. Addison*, 498 F.2d 741 (D.C. Cir. 1974); *United States v. Stifel*, 433 F.2d 431, 438 (6th Cir. 1970)); see also, e.g., *United States v. Frogge*, 476 F.2d 969, 970 (5th Cir. 1973); *Lindsey v. United States*, 237 F.2d 893, 895 (9th Cir. 1956), discussed at *supra* notes 7-10 and accompanying text.

55. FED. R. EVID. 402 provides: "All relevant evidence is admissible, except as otherwise provided by the Constitution of the United States, by Act of Congress, by these rules, or by other rules prescribed by the Supreme Court pursuant to statutory authority. Evidence which is not relevant is not admissible."

FED. R. EVID. 401 provides: "'Relevant evidence' means evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence."

FED. R. EVID. 403 provides: "Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence."

FED. R. EVID. 702 provides: "If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise."

FED. R. EVID. 703 provides: "The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to him at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence."

56. See Giannelli, *supra* note 5, at 1229 & n.247.

adopted this view, while others have rejected it.⁵⁸

Without discussing in any of its decisions the merits of the competing arguments regarding the effect of the Federal Rules on the *Frye* standard,⁵⁹ the Ninth Circuit, apparently convinced that *Frye* was not repealed, has continued to apply that standard long after the Federal Rules became effective.⁶⁰ A recent decision reveals, however, that whether the *Frye* standard survives the Federal Rules is still an open question in the Ninth Circuit. In *United States v. Fleishman*,⁶¹ the trial court permitted an expert handwriting analyst who had examined a note containing evidence of illicit drug dealing to testify that the note was probably prepared by the defendant. The Ninth Circuit affirmed.⁶² The defendant's challenge to the expert's

57. See *id.* at 1229 & n.248.

58. See *id.* at 1229 & n.249.

59. Those who argue that the *Frye* test survived the enactment of the Federal Rules have some support in the legislative history. Because the Federal Rules were not intended to be a comprehensive codification of the rules of evidence, a number of evidentiary rules are not covered, and many others, though mentioned, are treated only in a general fashion. Therefore, it can be argued that because *Frye* was the established rule and no statement repudiating *Frye* appears in the legislative history, the general acceptance standard remains intact.

Those who argue that the Federal Rules repeal the *Frye* standard focus on the language of the Rules. Rule 401 defines relevant evidence as "evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Rule 402 mandates that "[a]ll relevant evidence is admissible, except as otherwise provided by the Constitution of the United States, by Act of Congress, by these rules, or by other rules prescribed by the Supreme Court pursuant to statutory authority." Because scientific evidence could be shown to be reliable and thus relevant under Rule 401 without regard to its general acceptance in the scientific community, and because none of the exclusions enumerated in Rule 402 is applicable, the Federal Rules have provided a standard of admissibility inconsistent with *Frye*. Although this argument has considerable merit, jurisdictions adopting the Uniform Rules of Evidence (1953), which contain a similar relevancy provision, have not accepted the argument.

Id. at 1229-30 (footnotes omitted). See generally *State v. Cavallo*, 88 N.J. 508, 517 n.2, 443 A.2d 1020, 1024 n.2 (1982); *Romero, The Admissibility of Scientific Evidence Under the New Mexico and Federal Rules of Evidence*, 6 N.M.L. REV. 187 (1976); Note, *Expert Testimony Based on Novel Scientific Techniques: Admissibility Under the Federal Rules of Evidence*, 48 GEO. WASH. L. REV. 774 (1980).

60. The Federal Rules of Evidence became effective on July 1, 1975 and "apply to actions, cases, and proceedings brought after the rules take effect," as well as "to further procedure in actions, cases, and proceedings then pending, except to the extent that application of the rules would not be feasible, or would work injustice, in which event former evidentiary principles apply." Act of Jan. 2, 1975, Pub. L. No. 93-595, 88 Stat. 1926 (codified at 28 U.S.C. Appendix (1976)).

61. 684 F.2d 1329 (9th Cir. 1982).

62. *Id.* at 1326.

testimony—that his findings were “inconclusive”—was dismissed easily: “Absolute certainty of result is not required for admissibility.”⁶³ Accordingly, the court deemed it *unnecessary* to determine whether the “tests” stated in *Amaral* (which include that evidence accord with “a generally accepted theory”)⁶⁴ have survived enactment of the Federal Rules,⁶⁵ although perhaps significantly, the court acknowledged in a footnote that it has proceeded on the assumption that the *Frye* standard has survived.⁶⁶

The court's recent reliance on *Frye*, as in the past, has often but not always been expressed. The court has continued to reject, usually without reference to *Frye*, polygraphic evidence previously rejected under *Frye*. More significantly, whenever the court has found that evidence does not meet the *Frye* standard, it has excluded that evidence.⁶⁷

2. Recent Applications

Shortly after the enactment of the Federal Rules of Evidence, the Ninth Circuit, in *United States v. Demma*,⁶⁸ reviewed a trial court's exclusion of polygraphic evidence. One defendant, convicted of conspiracy to import and distribute heroin, sought to introduce the opinion of a polygraph expert that the defendant, while subjected to the polygraph examination, truthfully denied that he had the intent to import and distribute heroin.⁶⁹ The district court excluded

63. *Id.* at 1337 (citing *United States v. Baller*, 519 F.2d 463, 466 (4th Cir.), *cert. denied*, 423 U.S. 1019 (1975)). The court noted, however, that “[i]t is undisputed that handwriting analysis is a science in which expert testimony assists a jury.” *Id.*

64. See *supra* notes 47-51 and accompanying text, especially note 50 and accompanying text.

65. 684 F.2d at 1337. Regarding whether *Frye* has been repealed by the Federal Rules, the court, in *Fleishman*, indicated that Rule 702, the text of which is set forth *supra* note 55, might be instructive.

66. “This court has interpreted *Amaral* and other cases to stand for the proposition that [a] necessary predicate to the admission of scientific evidence is that the principle upon which it is based “must be sufficiently established to have gained general acceptance in the particular field to which it belongs.”” 684 F.2d at 1337 n.6 (citing *United States v. Kilgus*, 571 F.2d 508, 510 (9th Cir. 1978) (quoting *United States v. Brown*, 557 F.2d 541, 556 (6th Cir. 1977) (quoting *Frye*, 293 F. 1013, 1014 (1923))).

67. In one recent instance, however, it is arguable that the court admitted evidence, finding that it satisfied *Frye*, when a stricter application would have required exclusion. See *United States v. Hendershot*, 614 F.2d 648 (9th Cir. 1980), discussed *infra* at text accompanying notes 94-95 & 108-111.

68. 523 F.2d 981 (9th Cir. 1975).

69. Rather, the defendant insisted that he believed that he was cooperating with the government in an effort to obtain leniency for his parents, both of whom had been arrested on federal drug charges. *Id.* at 982, 987.

the evidence on two grounds: (1) it was not "adequately exculpatory,"⁷⁰ and (2) "the probative force of the evidence was seriously diminished by the lapse of time between the occurrence of the events and the taking of the test."⁷¹ In affirming the trial court's exclusion, the Ninth Circuit observed: "Our circuit has been inhospitable to contentions that a district court has abused its discretion in refusing to admit polygraphic evidence We decline to re-examine our restrictive views on this case."⁷²

In upholding the trial court's rejection of polygraphic evidence, the court stated, in *United States v. Marshall*,⁷³ "Because the polygraph has yet to gain general judicial recognition, the proponent of such evidence has the burden of laying a proper foundation showing the underlying scientific basis and reliability of the expert's testimony."⁷⁴ The court added that even if reliability can be demonstrated, polygraphic evidence might still be subject to exclusion if it would result in prejudice, too many confusing collateral issues, or an undue consumption of time.⁷⁵ Finally, the court observed:

With the polygraph's misleading reputation as a "truthteller," the widespread debate concerning its reliability, the critical requirement of a competent examiner and the judicial problems of self-incrimination and hearsay, a trial court will rarely abuse its discretion by refusing to admit the evidence, even for a limited purpose and under limited conditions.⁷⁶

In the Ninth Circuit's most recent review of polygraphic evidence, *United States v. Glover*,⁷⁷ the defendants had been convicted

70. *Id.* at 987.

71. *Id.*

72. *Id.* (citing *DeBetham*, 470 F.2d 1367). The court, however, reversed the convictions on other grounds. *Id.*

73. 526 F.2d 1349 (9th Cir. 1975), *cert. denied*, 426 U.S. 273 (1976).

74. *Id.* at 1360 (citing *Frye*). The court's reference to "general judicial recognition" unfortunately suggested that the court was considering a matter for judicial notice. By "judicial recognition," the court undoubtedly meant "admissibility in court under the *Frye* standard." See generally Giannelli, *supra* note 5, at 1205, ("Only after the technique has been tested successfully in [the experimental] stage and has passed into the 'demonstrable' stage will it receive *judicial recognition*." (emphasis add)). But see MCCORMICK § 203, at 491 ("'General scientific acceptance' is a proper condition for taking judicial notice of scientific facts, but not a criterion for the admissibility of scientific evidence.")

75. 526 F.2d at 1360 (citing *United States v. Urquidez*, 356 F. Supp. 1363, 1365-67 (C.D. Cal. 1973)); see *supra* notes 26-29 and accompanying text.

76. *Id.* at 1360; accord, *United States v. McIntyre*, 582 F.2d 1221, 1226 (9th Cir. 1978); *United States v. Radlich*, 581 F.2d 225, 229 (9th Cir. 1978); *United States v. Benveniste*, 564 F.2d 335, 338-39 (9th Cir. 1977); *United States v. Flores*, 540 F.2d 432, 436-37 (9th Cir. 1976).

77. 596 F.2d 857 (9th Cir. 1979).

of receiving and concealing stolen property moving in interstate commerce. The defendants sought to introduce the results of a polygraph test, performed upon the alleged "victim" of the theft, which indicated he had engineered the theft.⁷⁸ If this were true, the property, of course, would not be stolen, and the defendants could not be guilty of the offense charged. The Ninth Circuit, citing *Demma*⁷⁹ and its progeny,⁸⁰ affirmed the trial court's rejection of the evidence, finding no abuse of discretion.⁸¹

Though rarely discussing the *Frye* standard (by name or in substance), the court, in its polygraph decisions rendered after the Federal Rules of Evidence became effective, never departed from that standard. In contrast, the court's continued commitment to the *Frye* standard was more evident in the nonpolygraph cases.

For example, the court in *United States v. Bowers*⁸² expressly invoked the "general acceptance" standard in reviewing the admissibility of expert testimony based upon the process of "tool mark [ballistics] identification."⁸³ In that case, the court found the record sufficient to support the trial court's finding that the process was generally accepted.⁸⁴

78. The local police department administered the polygraph test, and its report concluded:

In the opinion of the examiner he [the alleged victim] was attempting deception when he answered "No" to the following relevant questions: (1) "Concerning the robbery yesterday—did you conspire with anyone to steal those gems and other jewelry?" (2) "Regarding the theft of the gems and jewelry—were you directly involved in that robbery?"

596 F.2d at 860.

79. See *supra* notes 68-72 and accompanying text.

80. See *supra* notes 73-76 and accompanying text.

81. 596 F.2d at 867. The court also observed, apart from the measure of reliability that polygraphic evidence enjoys or does not enjoy in the scientific community, the particular test results in *Glover* were unreliable. The court observed that the police report, *supra* note 77, noted that the subject was "worn out" and "not in an ideal state physically or emotionally," *id.* at 860, 867, that the subject was angry, and that might have affected the results, *id.*, and that the examiner was prepared to testify that he would have refused to conduct the examination if he had known that the result might be admitted into evidence, *id.* at 867.

82. 534 F.2d 186 (9th Cir.), *cert. denied*, 429 U.S. 942 (1976).

83. In *Bowers*, an expert testified that he had made microscopic comparisons of two bullets and found on them marks from which he could conclude that they had been fired from the same gun. *Id.* at 193.

84. *Id.* *Bowers* was decided less than one year after the Federal Rules of Evidence became effective. See *supra* note 60. Within one month of the effective date, the court, in deciding *United States v. Turner*, 528 F.2d 143 (9th Cir.), *cert. denied*, 423 U.S. 996 (1975), 429 U.S. 837 (1976), provided, in dicta, a strong indication that it would continue to apply *Frye*. The defendants in *Turner*, whose voices had been aurally identified by witnesses familiar with their voices, sought to impeach the identifying witnesses with the testimony of an expert who was

In the celebrated "Patty Hearst Case,"⁸⁵ the government introduced several tape recordings of, and statements written by, the defendant in which she indicated that she voluntarily participated in the bank robbery with which she was charged. In an effort to support her contention that she had not authored those statements, but had been coerced by her captors to utter them, the defendant sought to introduce the expert testimony of a psycholinguist. The expert was prepared to testify that her expertise enabled her to conclude, from a stylistic comparison of the statements introduced by the government and other statements known to be the defendant's, that the statements offered by the government could not have been authored by the defendant. Among the reasons indicated by the trial court for rejecting the expert testimony was "that the use of psycholinguistics for authorship attribution had not yet 'achieved such *general acceptance* among psychological and scientific authorities as to justify courts of law in admitting expert testimony on the subject.'" ⁸⁶

The most unequivocal invocation of the *Frye* standard by the Ninth Circuit since it expressly adopted that standard in 1956⁸⁷ came

prepared to opine that identification by computer analysis or spectrographic analysis is more reliable than unaided aural identification. After characterizing the expert's testimony as "a backhanded attempt to discredit the government's identification witnesses and diminish the weight to be accorded their testimony," *id.* at 166, the court found that the expert testimony "has little probative value," *id.*, and "would have created a substantial risk of the witness' invading the province of the jury," *id.* (citing *United States v. Moia*, 251 F.2d 255, 257 (2d Cir. 1958)). In a footnote, the court added, "Our conclusion renders unnecessary our consideration of the question whether mechanical and/or spectrographic voice identification techniques are in accordance with a *generally accepted* explanatory theory." 528 F.2d at 166-67 n.10 (citing *Amaral*, 488 F.2d at 1152) (emphasis added).

85. *United States v. Hearst*, 412 F. Supp. 893 (N.D. Cal. 1976), *aff'd*, 563 F.2d 1331 (9th Cir. 1977), *cert. denied*, 435 U.S. 1000 (1978).

86. 563 F.2d at 1350 (quoting the district court) (emphasis added). The district court stated two other reasons for rejecting the evidence as well:

Second, the relevancy of evidence on the issue of authorship was minimal. In the district court's words:

The issue with respect to these writings or tape recordings is the defendant's *state of mind* at the time she wrote or uttered the words used. Whether or not the defendant herself authored or composed the sentences chosen to express the ideas conveyed in the writing is immaterial to the issues of whether she subscribed to these ideas—that is, *whether she meant what she said*.

... Third, "the significance of [Singer's proposed] testimony did not warrant the inordinate consumption of time that would have been necessitated" by that testimony and any rebuttal testimony.

Id. at 1350 (citations omitted). The Ninth Circuit, hearing the appeal, affirmed the district court on the third ground; the court declined to review *Frye* issue (ground one) and assumed, but did not decide, that the evidence was relevant (ground two). *Id.*

87. See *supra* notes 7-10 and accompanying text.

in *United States v. Kilgus*.⁸⁸ The court held that evidence derived from a "forward-looking infra-red" (FLIR) detection and tracking system⁸⁹ is inadmissible.

Kilgus and two other defendants had been convicted of illegal importation of marijuana and possessing marijuana with intent to distribute. The only evidence connecting defendants to the seized marijuana was the testimony of a customs officer who on two occasions had observed one or two DC-3 aircraft on his FLIR screen. The first observation was of a landed DC-3 which customs officials viewed from the air. The airplane was approached by land vehicles from which marijuana was later seized. The second observation was of a DC-3 carrying the defendants. During his FLIR-aided sightings, the customs officer observed similar "spots" near the aircraft. He therefore concluded that he observed the same DC-3 on both occasions.⁹⁰

The court identified "several serious problems" with the officer's "unique identification."⁹¹ First, the court noted that the officer lacked an understanding of the theory underlying the FLIR system and had no special training in the unique identification of aircraft with the FLIR. Second, the government had not demonstrated that atmospheric conditions, which could have affected the FLIR, were identical during the two sightings. Third, defendant was denied the opportunity to impeach the officer or the FLIR device because much of the technical information concerning it is a military secret. "Fi-

88. 571 F.2d 508 (9th Cir. 1978).

89. The court explained the FLIR system:

[T]he FLIR is a relatively new system developed by the military for the detection and tracking of targets through the use of infrared light rays. The system scans an area much the same as radar and utilizes an array of infrared detectors (the type, number, and effectiveness of each being a military secret). Infrared rays are picked up by these detectors, electronically processed, and shown as a visual image on a 6" x 8 1/2" screen very similar to a black and white TV screen. The image on the screen appears in black, white and grey contrasts. That is, objects which are hotter than their background appear white and objects colder than their background appear black (or vice versa, since the "mode" of the system can be reversed to give the image a reversed effect analogous to a photograph negative).

There is no question that the FLIR can be used for *generic* identification of objects, i.e., that it can readily be used to distinguish between a plane and a boat, or even between a Lear jet and a DC-3.

Id. at 509.

90. *Id.* at 510.

91. *Id.* "At issue here . . . is whether the FLIR is sufficiently reliable and accepted in the scientific community to be used for *unique* identification. In other words, whether the FLIR can be used to identify one specific DC-3 from other DC-3's." *Id.* at 509.

nally, and most importantly, the un rebutted testimony of the defense's expert was that the FLIR is *not* a generally accepted technique among the scientific community to the unique identification of remote objects."⁹² The court added, "A necessary predicate to the admission of scientific evidence is that the principle upon which it is based 'must be sufficiently established to have gained general acceptance in the particular field to which it belongs.'"⁹³

The most recent Ninth Circuit case involving novel expert scientific testimony is *United States v. Hendershot*.⁹⁴ In *Hendershot*, the defendant challenged the admission of an incriminating shoeprint, identified by an expert as having been made by a shoe associated with the defendant. The defendant contended that the technique used, though widely accepted as a technique for securing fingerprint samples, is not sufficiently accepted as a technique for securing shoeprint samples. The court, observing that testimony was received indicating that the shoeprint-lifting technique is used and taught by several law enforcement agencies, held: "This is enough to make the shoeprint admissible in the absence of any evidence discrediting the lifting technique."⁹⁵

C. Summary: The "Elements" of the Frye Standard

By its terms, the *Frye* standard requires that "the thing from which the deduction [i.e., the expert's testimony] is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs."⁹⁶ Thus stated, the rule raises difficult questions: *What* exactly must be accepted and by *whom*? And *how* is acceptance to be established in court?⁹⁷ Through its decisions, the Ninth Circuit has undertaken—consciously or otherwise—to answer these questions. Although some common tendencies are evident from case to case, overall patterns in the Ninth Circuit, as elsewhere,⁹⁸ are sometimes difficult to discern.

92. *Id.* at 510.

93. *Id.* (citing *United States v. Brown*, 557 F.2d 541, 556 (6th Cir. 1977) (quoting *Frye*)).

94. 614 F.2d 648 (9th Cir. 1980).

95. *Id.* at 654.

96. *Frye*, 293 F. at 1014.

97. These questions—though obviously raised by the D.C. Court of Appeals' formulation of the rule—have received little express attention in the courts. Much legal literature on the subject slights these matters as well; fortunately, however, one scholar recently has undertaken an exceptionally insightful and useful exploration of these questions. See Giannelli, *supra* note 5, at 1208-19.

98. See *id.*

1. *What Must Be Accepted?*—"The thing from which the deduction is made"

In the Ninth Circuit, seemingly, it is settled that for evidence to be admitted under the *Frye* standard, both the procedure or technique employed *and* the theory or principle on which it is based must be accepted generally. This point was made expressly by the Ninth Circuit in *United States v. Kilgus*.⁹⁹ In most other instances, however, this result was implicit: in some cases, because the court's description of the evidence was sufficiently general to include both the procedure and its underlying theory;¹⁰⁰ in other cases, because the court's scrutiny of the technique necessarily entailed an appraisal of the underlying theory as well.¹⁰¹

2. *By Whom Must It Be Accepted?*—"The particular field in which it belongs"

Identifying the relevant field, a task not without difficulties, may well be dispositive of the admissibility issue.¹⁰² The Ninth Circuit has often characterized the relevant field broadly. For example, in *Kilgus*, the court considered whether the FLIR had been accepted "among the scientific community for the unique identification of remote objects."¹⁰³ Without further specification, the court determined that the FLIR had not been accepted.¹⁰⁴ In other cases, the

99. 571 F.2d at 510 (inquiring whether witness "understood the *theory* behind the FLIR equipment" and whether "the FLIR is . . . a generally accepted *technique* . . ." (emphasis added)). See also *United States v. Urquidez*, 356 F. Supp. at 1367 (polygraph case in which court examined "*assumptions*" regarding physiological responses to questioning, as well as the "testing *procedure*" itself).

100. E.g., *United States v. Marshall*, 526 F.2d at 1360 ("the polygraph;" "underlying scientific basis and reliability of the expert's testimony"); *Wahrlich v. Arizona*, 479 F.2d at 1138 ("the state of the developing art of psychiatry"); *DeBetham*, 470 F.2d at 1368 ("the accuracy of polygraphic evidence"); *United States v. Hearst*, 412 F. Supp. 893 ("the science of psycholinguistics").

101. E.g., *United States v. Hendershot*, 614 F.2d at 654 ("shoe-print lifting *technique*"); *United States v. Bowers*, 534 F.2d at 193 ("tool mark identification . . . *procedure*"); *Lindsey v. United States*, 237 F.2d at 895 ("narcoanalysis," "sodium pentothal interview," "such *tests* [of truthfulness]") (emphasis added).

Only one time did the court suggest that *Frye* contemplates an evaluation of theory alone. *United States v. Amaral*, 488 F.2d at 1152 ("generally accepted explanatory theory" of perception). The *Amaral* decision, however, offers little insight because (1) the circuit never actually reached the *Frye* issue, and (2) the evidence in question was offered for impeachment and no actual test or technique had been used.

102. Giannelli, *supra* note 5, at 1208 & n.9; see, e.g., *infra* notes 108-111 and accompanying text.

103. 571 F.2d at 510.

104. This result is curious. It is not surprising that a technique for the identification of

court has recognized that many scientific procedures implicate theories and principles from several traditional scientific disciplines; accordingly, the court has looked to those disciplines and even its "subdisciplines."¹⁰⁵ In yet other cases, the court almost seemed to ignore the scientific community and its subgroups, instead determining admissibility according to "acceptance" by the courts.¹⁰⁶ This latter approach may be an intellectually honest manifestation of the truth of one commentator's observation: "Instead of using *Frye* as an analytical tool to decide whether novel scientific evidence should be admitted, it appears that many courts apply it as a label to justify their own views about the reliability of particular forensic techniques."¹⁰⁷

The most troubling selection of an "accepting field" was made in *United States v. Hendershot*.¹⁰⁸ The admissibility of an incriminating shoeprint, secured through a "shoeprint lifting technique," was predicated on acceptance of that procedure *among crime technicians*. This approach is ill-advised because "the technician merely follows prescribed routines, and is not expected to understand their underlying fundamentals. He knows how, but not why."¹⁰⁹ Moreover, law enforcement personnel, like the originators and research pioneers of novel forensic techniques,¹¹⁰ are not disinterested. Accordingly, their opinions provide an inappropriate basis on which to conclude that the reliability of evidence is generally accepted.¹¹¹

unique objects is not generally accepted in a community, the vast majority of whose members are not customarily engaged in that activity.

105. *E.g.*, *DeBetham*, 470 F.2d at 1368 (court received testimony from "experts qualified in the field of polygraphy and in the related fields of psychology, psychiatry and physiology"); *Hearst*, 412 F. Supp. at 895 (court assessed acceptance of psycholinguistics "among psychological and scientific authorities"). See generally *Evidence, Annual Survey of South Carolina Law*, 32 S.C.L. REV. 119, 120 n.11 (1980).

106. *E.g.*, *United States v. Marshall*, 526 F.2d at 1360 ("the polygraph has yet to gain general judicial recognition" (emphasis added)); *Wahrlich v. Arizona*, 479 F.2d at 1138 ("We are not convinced that psychiatric testimony directed to a retrospective analysis of the subtle gradations of specific intent has enough probative value to compel its admission." (emphasis added)); *Lindsey v. United States*, 237 F.2d at 895 ("The courts have not generally recognized the trustworthiness and reliability of such tests as being sufficiently well established to accord the results the statutes of competent evidence." (emphasis added)).

107. Giannelli, *supra* note 5, at 1221.

108. 614 F.2d at 654.

109. Kirk, *The Interrelationship of Law and Science*, 13 BUFFALO L. REV. 393, (1964) cited in Giannelli, *supra* note 5, at 1215.

110. See generally *People v. Tobey*, 401 Mich. 141, 257 N.W.2d 537 (1977); *People v. Kelly*, 17 Cal. 3d 24, 549 P.2d 1240, 130 Cal. Rptr. 144 (1976).

111. See generally *People v. Shirley*, 31 Cal. 3d 18, 67-68, 641 P.2d 775, 805, 181 Cal. Rptr. 243, 273-74 (1982) (distinguishing between investigative usefulness of hypnotically-in-

3. Establishing "General Acceptance"

Even if a court has pinpointed the community in which to look for acceptance and has decided what this community must accept, the court still must decide what types of proof can be used to establish acceptance by the identified community. Courts have recognized three methods of proof: (1) expert testimony, (2) scientific and legal writings, and (3) judicial opinions.¹¹²

Without question, in the Ninth Circuit, the most common method by which proponents of scientific evidence have sought to establish acceptance is through expert testimony.¹¹³ Expert testimony also has been used to establish that certain evidence is not generally accepted.¹¹⁴ Rarely has the court resorted to legal precedent¹¹⁵ to determine general acceptance, and even less frequently, to scientific literature.¹¹⁶

II. AVOIDANCE OF THE *FRYE* STANDARD: HYPNOTICALLY INDUCED RECOLLECTION

A. Overview: The Cases

In *Wyller v. Fairchild Hiller Corp.*,¹¹⁷ the plaintiffs¹¹⁸ brought a products liability action, arising out of a helicopter crash, against the manufacturer. The plaintiff alleged that the helicopter's "fail safe"

duced recall and its admissibility in court); Spector & Foster, *Admissibility of Hypnotic Statements: Is the Law of Evidence Susceptible?*, 38 OHIO ST. L.J. 567, 580 (1977) (distinguishing between investigative usefulness of hypnosis and "the admissibility of statements elicited thereby."); *Evidence, Annual Survey of South Carolina Law*, 32 S.C.L. REV. 119, 119 n. 4 (1980) ("Photographing bite marks of crime victims at the pre-trial investigative stage of the criminal justice process for comparison with dentition impressions of suspects is a recognized and widely-practiced procedure among law enforcement agencies and forensic specialists For obvious reasons, admissibility in court is governed by stricter standards." (citation omitted)).

112. Giannelli, *supra* note 5, at 1215.

113. *Hendershot*, 614 F.2d at 654; *Kilgus*, 571 F.2d at 510; *Bowers*, 534 F.2d at 193; *DeBetham*, 470 F.2d at 1368; *Urquidez*, 356 F. Supp. at 1364.

114. *Kilgus*, 571 F.2d at 510.

115. *Cf. Hearst*, 412 F. Supp. at 895 (prior case authority from other jurisdictions urged (unsuccessfully) in support of admission); *Urquidez*, 356 F. Supp. at 1364 (transcript of testimony from *DeBetham* reviewed by court; polygraphic evidence excluded).

116. *Urquidez*, 356 F.2d at 1365 (court review of "published articles on various aspects of polygraphy.")

117. 503 F.2d 506 (9th Cir. 1974).

118. The action was brought by the only survivor of the crash, the owner of the helicopter, and the administratrix of the pilot's estate. *Id.* at 507-08.

mechanism malfunctioned during flight and caused the crash.¹¹⁹

Plaintiff Wyller, the sole survivor of the crash, had only a "limited recollection"¹²⁰ of circumstances surrounding the crash. In an effort to enhance his recollection, Wyller underwent several hypnotic treatments. The pretrial treatments began after his deposition was taken.¹²¹ Prior to Wyller's testifying at trial, the defendant sought to limit his testimony to that given at his deposition. Alternatively, the defendant argued that before the court could receive testimony recalled only after the hypnotic session, the hypnotist must establish the reliability of the procedures used. The trial court, however, rejected this argument and permitted the plaintiff to testify as to both the pre- and posthypnotic recollection. Thereafter, the hypnotist did testify, "fully elucidat[ing] the procedures employed."¹²² The defendant appealed.

The Ninth Circuit rejected the defendant's contention that Wyller's testimony was inherently unreliable:

Wyller testified from his present recollection, refreshed by the treatments. His credibility and the weight to be given such testimony were for the jury to determine. [Defendant] was entitled to, and did, challenge the reliability of both the remembered facts and the hypnosis procedure by extensive and thorough cross-examination of Wyller and the hypnotist. Under the circumstances, we perceive no abuse of discretion by the district court.¹²³

With *Wyller* decided on that basis, the outcome of *Kline v. Ford Mo-*

119. The actions were brought in the Alaska state court; the defendant removed to the Federal District Court for the District of Alaska. *Id.* at 508.

120. *Id.* at 509.

121. The treatments were given approximately four years after the crash. *Id.*

122. *Id.*

123. *Id.* at 509-10 (citing *Harding v. State*, 5 Md. App. 230, 246 A.2d 302 (1968), *cert. denied*, 395 U.S. 949 (1969); *State v. Jorgensen*, 8 Or. App. 1, 492 P.2d 312 (1971)).

At trial, the district court also permitted Wyller and the hypnotist to testify as to the substance of certain statements made by Wyller and recorded while he was hypnotized. The appellate court did not formally consider the issue because defendant's counsel failed to object at trial, but the court did state that if the matter were properly before the court, it would affirm because none of the statements were offered to prove the truth of the statement, but for an "independent purpose," not identified by the court. 503 F.2d at 510 n.6.

Nor did the court formally consider whether it was proper to admit statements by the hypnotist as to the reliability of Wyller's hypnotic statements. The court did suggest, however, that those statements should not have been admitted because they "bear a similarity to that concerning the results of polygraph tests," *id.* n.7 (citing *Pulakis v. State*, 476 P.2d 474, 479 (Alaska 1970); *People v. Harper*, 111 Ill. App. 2d 204, 250 N.E.2d 5, 7 (1969)), but that the error did not affect the "substantial rights of the parties" or create "a high likelihood of a miscarriage of justice"; accordingly, the error was harmless, 503 F.2d at 510 n.7. Indeed, several years later, in *United States v. Awkard*, 597 F.2d 667, 670 (9th Cir.), *cert. denied*, 444 U.S.

tor Co.,¹²⁴ one year later, would not be in doubt.

In *Kline*, the driver and passenger in a Ford Pinto brought suit for personal injury damages against the manufacturer, alleging that design defects in the acceleration linkage and steering wheel lock mechanism of the automobile caused a single car collision in which they were injured. The plaintiffs contended that while they were driving, the car's acceleration mechanism failed to return from the depressed position. The driver then attempted to turn off the ignition and, in the process, inadvertently locked the steering mechanism with her knee. With the wheels locked in position, the car was directed off the highway and crashed into a fence.¹²⁵

The driver went into a coma, never testified, and died during the pendency of the appeal to the Ninth Circuit. The passenger suffered retrograde amnesia and initially had no recollection of the collision or events leading up to it. Before trial, however, she underwent a hypnosis session and thereafter was able to testify in a manner substantially consistent with the plaintiffs' theory of the cause of the accident. The court declared a mistrial and, after hearing argument, ruled that the witness' testimony would be inadmissible at the new trial. Finding that no sufficient foundation for the validity of hypnosis had been laid, the court deemed the witness incompetent.¹²⁶ The Ninth Circuit, relying on *Wyller*, reversed: "Although the device by which recollection was refreshed is unusual, in legal effect her situation is not different from that of a witness who claims that his recollection of an event he could not remember earlier was revived when he thereafter read a particular document."¹²⁷

The rule that hypnotically-induced recollection is admissible was extended to criminal cases in *United States v. Adams*.¹²⁸ In *Ad-*

805 (1979), the Ninth Circuit held that an expert's opinion on the reliability of hypnotic statements is not admissible. See *infra* note 143 and accompanying text.

Finally, the court did not formally consider (again, because the issue was not properly preserved) whether the trial court erred in failing to issue a cautionary instruction to the jury concerning the plaintiff's hypnotically induced recollection. The court did observe, however, that "such an instruction would have been appropriate under the circumstances." 503 F.2d at 510 (citing *Harding v. State*, 5 Md. App. 230, 246 A.2d 302 (1968), *cert. denied*, 395 U.S. 949 (1969)).

124. 523 F.2d 1067 (9th Cir. 1975).

125. *Id.* at 1069.

126. *Id.* See also *United States v. Awkard*, 597 F.2d 667, 670 n.3 (1979).

127. 523 F.2d at 1069-70 (citing *Wyller v. Fairchild Hiller Corp.*, 503 F.2d 506 (9th Cir. 1974); CAL. EVID. CODE § 771 (West 1966) ("Production of writing used to refresh memory")) B. WITKIN, CALIFORNIA EVIDENCE § 1167, at 1080-81 (2d ed. 1966).

128. 581 F.2d 193 (9th Cir. 1978) *cert. denied*, 439 U.S. 1006 (1978).

ams, the court upheld the admission of testimony from an alleged witness to a robbery and murder who had undergone pretrial hypnosis. The witness' prehypnosis statements were apparently helpful to the defendant, and the defendant sought to limit the witness' testimony to those statements. Called by the defendant at trial, the witness was impeached by the prosecution with these posthypnosis statements.¹²⁹ The defendant argued that the posthypnosis statements should be excluded—for all purposes—because the fact of hypnosis rendered the witness incompetent, at least *as to his posthypnotic statements*.¹³⁰ Moreover, the defendant contended that the prosecution's use of the posthypnotic statements contravened his sixth amendment rights to confront adverse witnesses and to call witnesses on his own behalf.¹³¹ The predicate to these arguments, the court noted, is that previously hypnotized witnesses are incompetent and their testimony inherently unreliable as a matter of law. The court had rejected this proposition earlier in *Kline*.¹³²

The court, however, recognized the "dangerous potential for abuse"¹³³ created by such a ruling: "Great care must be exercised to insure that statements after hypnosis are the product of the subject's own recollections, rather than of recall tainted by suggestions received under hypnosis."¹³⁴ Toward this end, the court made some recommendations:

We think that, at a minimum, complete stenographic records of interviews of hypnotized persons who later testify should be maintained. Only if the judge, jury, and the opponent know who was present, questions that were asked, and the witness's responses can the matter be dealt with effectively. An audio or

129. *Id.* at 198.

130. *Id.* at 198-99. Interestingly, the court characterized the defendant's argument as follows: "[Defendant] attempted to exclude *all in-court testimony* of [the previously hypnotized witness] on the ground that *no testimony* from witnesses who had been hypnotized could be reliable" *Id.* at 199 (emphasis added). This contention, of course, is curious in light of the defendant's having called the witness to the stand. Indeed, if the court had been persuaded by the defendant's "competence" argument, it would have found that the court erred in allowing the witness to testify as to the subject matter explored during hypnosis, in the form of either pre- or posthypnotic statements. See generally *infra* notes 179-181 and accompanying text. Under a different view, the witness would be permitted to testify to facts demonstrably recalled prior to hypnosis. See generally *infra* notes 204-210 and accompanying text. For an interesting reaction to *Adams*, see *People v. Smrekar*, 68 Ill. App. 2d 379, 385 N.E.2d 848 (1979) (noting confusion regarding the facts and significance of *Adams*).

131. 581 F.2d at 198-99.

132. *Id.* at 199. See generally *supra* notes 124-127 and accompanying text.

133. 581 F.2d at 198.

134. *Id.* at 198-99.

video recording of the interview would be helpful.¹³⁵

Although the recommendations were pure dicta, the court's analysis strongly suggested that had the defendant objected to the "adequacy of the foundation laid for the receipt of the testimony,"¹³⁶ instead of challenging the "inherent reliability" of the evidence, the court would have found that the admission of the evidence was erroneous.¹³⁷ Nonetheless, this reading is doubtful in light of the court's decision one year later in *United States v. Awkard*.¹³⁸

In *Awkard*, the defendant's first argument was that the trial court erroneously admitted the testimony of a government witness whose recall had been induced by hypnosis. This argument was predictably rejected on the basis of *Wyller* and its progeny.¹³⁹ The court found the issues raised by the hypnotist-expert's testimony "more troublesome."¹⁴⁰ The trial court, reading *Wyller*, *Kline*, and *Adams* "as requiring the expert testimony to establish admissibility,"¹⁴¹ permitted the hypnotist, before the previously hypnotized witness testified, to "lay a foundation" for that testimony with: (1) an explanation of the hypnosis technique, (2) his opinion on the reliability of hypnosis at enhancing recollection, and (3) his opinion on whether hypnosis had accurately refreshed the recollection of the particular witness who later testified.¹⁴² The Ninth Circuit held that the expert's testimony, the effect of which was to "bolster" the previously hypnotized witness' testimony, should not have been admitted unless the opponent attempted to impeach the recall of that witness "by bringing out or exploring the fact of hypnosis."¹⁴³ The court noted that the defense "strategically chose not to challenge the use of

135. *Id.* at 199 n.12. Although never required by the Ninth Circuit, comparable safeguards are now mandatory in some jurisdictions. See generally *infra* notes 173-175 and accompanying text.

136. 581 F.2d at 199.

137. "[W]e do not approve of the hypnosis methods used here . . . : An uncertified hypnotist conducted the session. No record was made of the identity of those present, the questions asked, or the responses given." *Id.* & n.13.

138. 597 F.2d 667 (9th Cir.), cert. denied, 444 U.S. 885 (1979).

139. *Id.* at 669. The court also noted that "[t]he use of hypnotically adduced evidence has gained acceptance in many jurisdictions." *Id.* (citing Note, *Refreshing the Memory of a Witness Through Hypnosis*, 5 U.C.L.A.-ALASKA L. REV. 266 (1976)).

140. 597 F.2d at 669.

141. *Id.* at 669 & n.2, 670.

142. *Id.* at 669.

143. *Id.* at 669-70. While the court acknowledged that if the previously hypnotized witness' credibility has been impeached, the expert would have been permitted to testify (1) on the procedures used on the particular witness, and (2) on the value of hypnosis generally, the expert should not be permitted to state his opinion that the witness's memory had been accu-

hypnosis, given its current acceptance in the courts and [the particular expert's] credentials."¹⁴⁴ The court explained that questions concerning circumstances surrounding the hypnosis procedure, i.e., the subject of the safeguards recommended by the court in *Adams*,¹⁴⁵ should be resolved by the judge while the jury is not present.¹⁴⁶

Whether the testimony of a previously hypnotized witness is admissible at trial is not, in the Ninth Circuit's view, an issue that implicates the rationale of *Frye*. Indeed, whether the scientific community generally accepts the hypnotic process or its theoretical underpinnings goes only to the testimony's weight, not its admissibility. Rather, testimony induced by hypnosis, in the court's view, is merely the product of that time-honored procedure,¹⁴⁷ "refreshing recollection," and is subject to the evidentiary rules governing that practice.

B. *The Basis for Avoidance: "Refreshing Recollection"*

Hypnosis would appear to fall within the refreshed recollection doctrine as it has been traditionally expressed. "*Anything* may in fact revive a memory: a song, a scent, a photograph, an allusion, even a past statement known to be false."¹⁴⁸ Thus expressed, there are formidable arguments that the doctrine is sweepingly overbroad.¹⁴⁹

Assuming that the Ninth Circuit's decisions tenably equate hypnotically induced testimony with, for example, testimony refreshed by the witness' reading of a document, the decisions to that effect have generated unfortunate ancillary consequences.

Most strikingly, it is difficult to envision circumstances under which trial courts following Ninth Circuit precedent would exclude a previously-hypnotized witness' testimony on the basis of its "inher-

ately refreshed: "Under the Federal Rules, opinion testimony on credibility is limited to character; all other opinions on reliability are for the jurors themselves to form." *Id.* at 670-71.

144. *Id.* at 670.

145. See *supra* notes 134-135 and accompanying text.

146. 597 F.2d at 669 n.2. "If the trial judge . . . permits the subject to testify, the adverse party may, if it wishes, expose the details of the hypnosis to the jury." *Id.*

147. See MCCORMICK § 9, at 14-15.

148. *United States v. Rappy*, 157 F.2d 964, 967 (2d Cir. 1946) (emphasis added), *cert. denied*, 329 U.S. 806 (1947); see *Jewett v. United States*, 15 F.2d 955, 956 (9th Cir. 1929) ("[I]t is quite immaterial by what means the memory is quickened; it may be a song, or a face, or a newspaper item, or a writing of some character.").

149. See *infra* notes 187-88 and accompanying text. But see *infra* note 163 and accompanying text.

ent unreliability" because, as the Ninth Circuit observed in *Adams*, "we rejected that in *Kline*."¹⁵⁰ After a pretrial inquiry into circumstances of the hypnotic session, however, a court might conclude that the safeguards were not observed and thus exclude the witness' testimony because it was not "truly the witness's own recollection." Yet the validity of the underlying theory that hypnosis can reliably refresh a subject's memory is now apparently assumed.¹⁵¹ This result is curious in light of the Ninth Circuit's reluctance to scrutinize the reliability of hypnotic memory enhancement under the *Frye* or any other standard.¹⁵²

Moreover, the very fact that a witness' testimony has been induced by hypnosis will not be made known to the jury unless the opponent attacks the witness' credibility. Modernly, when a witness testifies after refreshing his memory with a writing, the adverse party is commonly entitled to inspect the writing, cross-examine the witness with respect to it, and even have the writing submitted for the jury's inspection.¹⁵³ Thus used, the writing is, in effect, a prior inconsistent statement offered to impeach the witness' testimony.¹⁵⁴ It was by analogy to these principles that the court in *Awkard* held that the hypnotist's bolstering testimony was inadmissible unless the op-

150. See *supra* note 132 and accompanying text.

151. Relying on its finding in *Kline* that hypnotically induced testimony is not inherently unreliable or not unreliable as a matter of law, the court in *Adams*, by declining to examine the reliability of evidence apart from the hypnotic procedures resorted to in the particular case, assumed that the evidence is reliable. See *supra* text accompanying note 150; see *infra* note 152.

152. In effect, the court's determination that hypnosis is not inherently unreliable amounts to a resounding endorsement. Because the Ninth Circuit, in *Awkard*, however, admitted the possibility that a party might attack the previously-hypnotized witness' recall by "bringing out or exploring the fact of hypnosis," 597 F.2d at 670, it stopped just short of judicially noticing the reliability of hypnotic memory enhancement. Even the *Frye* standard's most ardent critics would invoke the test for that judicial determination. *E.g.*, McCORMICK § 203, at 491.

153. FED. R. EVID. 612:

Except as otherwise provided in criminal proceedings by section 3500 of title 18, United States Code, if a witness uses a writing to refresh his memory for the purpose of testifying, either—

(1) while testifying, or

(2) before testifying, if the court in its discretion determines it is necessary in the interests of justice,

an adverse party is entitled to have the writing produced at the hearing, to inspect it, to cross-examine the witness thereon, and to introduce in evidence those portions which relate to the testimony of the witness

See also McCORMICK § 9, at 17-18 & n.60.

154. J. WEINSTEIN & M. BERGER, WEINSTEIN'S EVIDENCE ¶¶ 612[01], 612[05] (1981).

ponent "attacks the witness's ability to recall by bringing out or exploring the fact of hypnosis."¹⁵⁵ The analogy drawn, however, between submitting to the jury a document used to refresh, and advising the jury that a witness has been refreshed by hypnosis, is rough and works a substantial injustice.

More analogous to submitting a document to the jury would be submitting the videotape account of the "refreshing" hypnotic session.¹⁵⁶ Moreover, that the witness merely claims his recall has been refreshed by hypnosis, quite arguably, is something the opponent should be entitled to have the jury know without incurring the risk that the proponent of the refreshed testimony will rehabilitate the witness with expert platitudes concerning hypnosis.¹⁵⁷ Indeed, the Ninth Circuit's observation in *Wyller* that "a cautionary instruction to the jury regarding . . . testimony insofar as it consisted of information recalled by hypnosis would be appropriate"¹⁵⁸ is compatible with this view. Also supporting this argument are many decisions that allow the jury on its own motion to inspect a document used for refreshment,¹⁵⁹ because if the jury is to request the writing, the jury

155. See *supra* note 143 and accompanying text.

156. A videotape of the hypnotic session would exist if the police or the prosecutor heeded the recommendation made in *Adams*, 581 F.2d at 199. See *supra* notes 133-35 and accompanying text. See generally *infra* note 176 and accompanying text.

157. *But cf.* *Commonwealth v. Taylor*, 294 Pa. Super. 171, 179, 439 A.2d 805, 809 (1982) ("[W]e do not see that it was the affirmative duty of the prosecution to mention the use of hypnosis to the jury, since the prosecution had already made the tactical decision to intentionally avoid utilizing any testimony or evidence which was initially evoked as a result of the hypnotic session.")

158. See *supra* note 123 and accompanying text; *cf.* *Austin v. Barker*, 110 App. Div. 510, 96 N.Y.S. 814 (1906) (civil conviction for seduction reversed because of plaintiff's failure to produce evidence of circumstances of hypnotic refreshment session; jury, however, cautioned not to give any greater weight to hypnotically induced testimony than to other testimony), *cited in* *Harding v. State*, 5 Md. App. 230, 246 A.2d 302 (1968), *cert. denied*, 395 U.S. 949 (1969); *Clark v. State*, 379 So. 2d 372, 375-76 (Fla. App. 1980) ("[I]t was entirely proper that the jury be given the details of the hypnosis in order that they might evaluate the credibility of [the witness'] identification of appellant. The state was entitled to have the jury weigh all of the circumstances relating to the hypnosis in determining the credibility they would attach to the post hypnotic identification."); *Creamer v. State*, 232 Ga. 136, 138, 205 S.E.2d 240, 242 (1974) (*per curiam*) (hypnotically induced testimony admitted, court noting "[t]he fact [of hypnosis] and the purpose therefor were made clear to the jury."); *State v. McQueen*, 295 N.C. 96, 122, 244 S.E.2d 414, 427 (1978) (hypnotically-refreshed prosecution witness permitted to testify; court noted, "The jury was fully advised that the witness had been so hypnotized The credibility of such testimony . . . is matter for the jury's consideration," yet tape of hypnotic session not offered into evidence, witness not cross-examined with reference to hypnosis, hypnotist not called by either side).

159. See, e.g., *United States v. Rappy*, 157 F.2d 964, 967 (2d Cir. 1946) (citing *WIGMORE* § 763), *cert. denied*, 329 U.S. 806 (1947); *Annot.*, 82 A.L.R.2d 473, § 27 (1962).

must know of it.

C. *The Supportive Case Law*

Other courts, some influenced by the Ninth Circuit's decision,¹⁶⁰ have admitted hypnotically induced testimony. These cases have little doctrinally in common, though there are bases on which to compare the decisions. Perhaps the most meaningful way to examine these cases is by noting the extent to which the deciding courts revealed a concern for assessing the reliability of the hypnotic induction technique.

Like the Ninth Circuit, many courts perceive no *Frye* issue at all. That is, to these courts the hypnotically induced testimony is not novel scientific evidence. Most commonly, this approach is implied by the absence from the courts' decisions of any examination of the level at which the scientific community accepts the theory and technique of hypnotic memory inducement.¹⁶¹ One court, however, expressly distinguished posthypnotic testimony from other, more celebrated forms of novel scientific evidence to which *Frye* traditionally has been applied.¹⁶² To all these courts, the testimony is, in legal effect, no different from any other form of refreshed recollection: the circumstances bear on the weight to be given the evidence by the jury and not on the issue of admissibility.¹⁶³

160. *E.g.*, *State v. McQueen*, 295 N.C. 96, 244 S.E.2d 414 (1978) (citing *inter alia* *Kline*, 523 F.2d at 1069-70; *Wyller*, 503 F.2d at 509); *Chapman v. State*, 638 P.2d 1280, 1282, 1284 (Wyo. 1982) (citing *Awkard*; *Kline*; *Wyller*).

161. *See* *Connolly v. Farmer*, 484 F.2d 456 (5th Cir. 1973) (per curiam); *Clark v. State*, 379 So. 2d 372 (Fla. App. 1980); *People v. Smrekar*, 68 Ill. App. 3d 379, 385 N.E.2d 848 (1979); *State v. Greer*, 609 S.W.2d 423 (Mo. Ct. App. 1980); *State v. McQueen*, 295 N.C. 96, 244 S.E.2d 414 (1978).

162. *State v. Temoney*, 45 Md. App. 569, 577-78, 414 A.2d 240, 244 (1980), *vacated on other grounds*, 290 Md. 251, 429 A.2d 1018 (1981) ("[W]hile [*Frye*] would preclude the admission of expert opinion *deduced* from that technique . . . it would not also preclude . . . the admission of a description of the procedure used to hypnotize the victim or the hypnotically induced testimony itself." (citations omitted)).

163. Some courts expressly refer to hypnotically induced testimony as a form of refreshed recollection. *See* *Clark v. State*, 379 So. 2d 372 (Fla. App. 1980); *People v. Smrekar*, 68 Ill. App. 3d 379, 385 N.E.2d 848 (1979); *State v. McQueen*, 295 N.C. 96, 244 S.E.2d 414 (1978). That refreshed recollection is the basis for admitting the testimony, however, is only implicit in decisions by other courts. *See* *Connolly v. Farmer*, 484 F.2d 456 (5th Cir. 1973); *State v. Greer*, 609 S.W.2d 423 (Mo. Ct. App. 1980); *cf.* *United States v. Narcisco*, 446 F. Supp. 252 (E.D. Mich. 1977) (basis for admitting posthypnotic testimony unclear; court notes witness' assertions that hypnosis was never necessary because witness was feigning memory loss); *Creamer v. State*, 232 Ga. 136, 138, 205 S.E.2d 240, 241-42 (1974) (per curiam) (basis for admitting posthypnotic testimony unclear; court notes that witness related to law enforcement officials "the principal facts and details of the crimes prior to her [hypnotic] sessions.")

Other courts, though admitting the testimony as refreshed recollection, have expressed concern for the reliability of the theory and technique of hypnotic recall.¹⁶⁴ The concern in these cases, however, never extended far enough to justify a formal application of the *Frye* test to the evidence.

In only one of these cases, *State v. Hurd*,¹⁶⁵ did a court purport to examine general scientific acceptance as a matter affecting admissibility. To be sure, in *Hurd*, the Superior Court of New Jersey applied a curiously reformulated *Frye* test:

It must be conceded that as a technique or procedure for determining "truth," hypnosis would fail to satisfy the *Frye* test of general acceptance in the scientific community.

.....
In light of the expert testimony and medical journals admitted in evidence in this case, we are satisfied medical research has established that, to varying degrees, a large portion of the population has the capacity to enter a hypnotic trance and that hypnotized subjects who are directed to do so have the ability to concentrate on a past event and volunteer previously unrevealed statements concerning the event. In this limited sense hypnosis has met the test imposed by *Frye*.¹⁶⁶

D. *The Newer Trends*

Since 1979, when the Ninth Circuit decided *Awkard*, three discernible views have emerged in American jurisdictions regarding the admissibility of hypnotically induced testimony. These views, which contrast in varying degrees with the view that such testimony is no

164. See *Harding v. State*, 5 Md. App. 230, 246, 246 A.2d 302, 311-12 (1968) ("[M]odern medical science has now recognized the possibility that memory of painful events can sometimes be restored by hypnosis, although some authorities warn that fancy can be mingled with fact in some cases." (citations omitted)), cert. denied, 395 U.S. 949 (1969); *People v. Hughes*, 99 Misc. 2d 863, 866, 417 N.Y.S. 2d 643, 648 (Onondaga County Ct. 1979) ("Given a proper foundation of general acceptance in the scientific community and adequate procedural safeguards to insure reliability, the Court believes that evidence elicited through hypnosis can be valuable to the determination of the guilt or innocence of those who have been accused of crimes."), rev'd, 88 A.D.2d 17, 452 N.Y.S.2d 929 (1982) appeal granted, 57 N.Y.2d 778, 440 N.E.2d 1348, 454 N.Y.S.2d [No. 8] LXXXIX (1982); cf. *People v. McDowell*, 103 Misc. 2d 831, 837, 427 N.Y.S.2d 181, 184 (Sup. Ct. 1980) ("The expert testimony upon this hearing clearly demonstrates that the opportunity for contamination of the subject's true memory is a distinct possibility unless extreme caution is observed."). For a discussion of the "safeguard" approach to this issue, see *infra* text accompanying notes 169-178.

165. 173 N.J. Super. 333, 414 A.2d 291 (1980).

166. *Id.* at 361, 414 A.2d at 305.

different from other forms of refreshed recollection,¹⁶⁷ are as follows: (1) some courts, though accepting the basic premise of the Ninth Circuit's analysis that the testimony is akin to any refreshed recollection, nevertheless condition admissibility on the proponent's compliance with certain procedural safeguards; (2) the California Supreme Court has concluded that previously hypnotized witnesses are "contaminated" by that experience and are, in effect, incompetent to testify on the subjects explored during hypnosis; and (3) recently, an increasing number of courts exclude witnesses' posthypnotic testimony that concerns the subject of their hypnotic examinations, with one important qualification: previously hypnotized witnesses are permitted to testify as to matters they were able to recall and relate prior to hypnosis.

1. *The Safeguard Approach*

The courts that condition admissibility to some measure on compliance with safeguards have been unconcerned, for the most part, with assessing the underlying reliability of hypnotic recall. Rather, these courts typically have focused on the potential posed by hypnotically induced testimony for violating a criminal defendant's constitutional rights.¹⁶⁸ To that extent, the safeguards are well directed because they serve to limit the coerciveness and suggestive-

167. This is, for all practical purposes, the approach taken thus far in the Ninth Circuit, its discussion of safeguards in *Adams* notwithstanding. See *infra* text accompanying notes 170-171. More clearly illustrative of this approach, however, are those few courts that admit hypnotically induced testimony as refreshed recollection without regard to the scientific community's acceptance of the theory or technique, and do not even so much as recommend that safeguards be observed. *E.g.*, *State v. Greer*, 609 S.W.2d 423 (Mo. Ct. App. 1980).

168. Among the interesting constitutional questions raised by hypnotically induced testimony are the following:

(1) Whether a pretrial hypnotic session directed to enhance a victim's ability to recall the identity of a perpetrator is an unconstitutionally suggestive identification that requires the exclusion of the identification at trial. See, *e.g.*, *State v. Hurd*, 173 N.J. Super. 333, 414 A.2d 291 (1980).

(2) Whether a pretrial hypnotic session, the effect of which is to "replace" a witness' memory with a "different" memory, constitutes prosecutorial destruction of exculpatory evidence. See *People v. McDowell*, 103 Misc. 2d 831, 427 N.Y.S. 2d 181 (1980); *cf.* *State v. Long*, 32 Wash. App. 732, 649 P.2d 845 (1982).

(3) Whether the effect of the pretrial hypnosis of a prosecution witness constitutes a denial of the defendant's right to cross-examine and confront adverse witnesses. See, *e.g.*, *United States v. Adams*, 581 F.2d 193 (9th Cir. 1978).

(4) Whether a defendant's right to present witnesses on his own behalf is abridged by a prosecutor's impeachment of a defense witness with that witness' inconsistent posthypnotic statements. See, *e.g.*, *id.*

(5) Whether a defendant is entitled to have legal counsel present during the hypnotic

ness of a pretrial identification session conducted with a victim or witness.¹⁶⁹ Such safeguards, however, are woefully inadequate to the task for which the *Frye* standard was fashioned.

Moreover, the vast majority of courts that have discussed the value of the safeguards have not actually made compliance a precondition to admitting the testimony.¹⁷⁰ For example, in *Adams*, the Ninth Circuit appeared to establish the maintenance of pretrial interviews records as a minimum standard for admission of the testimony.¹⁷¹ In *Awkard*, however, the *Adams* safeguards were characterized as merely "suggested," and the trial court's decision to exclude the testimony was reversed despite the apparent lack of compliance with the *Adams* safeguards.¹⁷² Other courts, however, to a more significant degree have conditioned admissibility on compliance with the safeguards.¹⁷³

examination of a state's witness. *Cf.* *People v. McDowell*, 103 Misc. 2d 831, 427 N.Y.S.2d 181 (1980).

Except to the extent that these issues have been treated as analytically inseparable from the question of reliability, they are beyond the scope of this Article. *See generally supra* text accompanying notes 130-35 and *infra* note 178. For an interesting analysis of some of these issues, see Alderman & Barrette, *Hypnosis on Trial: A Practical Perspective on the Application of Forensic Hypnosis in Criminal Cases*, 18 CRIM. L. BULL. 5 (1982). *See also* Falk, *Posthypnotic Testimony—Witness Competency and the Fulcrum of Procedural Safeguards*, 57 ST. JOHN'S L. REV. 30, 52-59 (1982).

169. *See, e.g.*, *State v. Hurd*, 173 N.J. Super. 333, 414 A.2d 291 (1980) (adopted safeguards discussed *infra* text accompanying notes 174-176). *But see infra* note 281.

170. *See infra* notes 171-72 and accompanying text and cases cited *infra* note 173.

171. *Adams*, 581 F.2d at 199 n.12 ("We think that, at a minimum, complete stenographic records of interviews of hypnotized persons who later testify should be maintained An audio or video recording of the interview would be helpful.")

172. *Awkard*, 597 F.2d at 669 n.2. The court did not mention any record and a record was not included among the foundation evidence admitted (erroneously, in the Ninth Circuit's view) at trial. *Id.* at 669.

173. *Compare* *State v. Beachum*, 97 N.M. 682, —, 643 P.2d 246, 253 (1982) (adopting *Hurd* standards; *see infra* notes 174-177 and accompanying text) *with* *People v. Smrekar*, 68 Ill. App. 3d 379, 388, 385 N.E.2d 848, 854 (1979) ("Although greater safeguards would be maintained by following the procedure in the *Adams* footnote, we find the doctor here to have been shown to be competent and his procedure to have not been unduly suggestive."); *Pearson v. State*, — Ind. —, —, 441 N.E.2d 468, 473 (1982) ("The hypnotic session is just one of many factors which can affect a witness. However, since the inherent dangers with the use of hypnosis are now well documented, the careful attorney or investigator should take precautions such as those enumerated in . . . *Hurd*."); *People v. McDowell*, 103 Misc. 2d 831, 837, 427 N.Y.S.2d 181, 184 (1980) ("[T]he Court should be allowed to exclude such testimony in cases where the procedure utilized is impermissibly suggestive and does not substantially conform to safeguards stated earlier in this decision."); *State v. Long*, 32 Wash. App. 732, 737, 649 P.2d 845, 847 (1982) ("[T]here must be care taken in the employment of the technique and there must be good cause. In this case there was neither." *Hurd* standards discussed, but not formally adopted); *Chapman v. State*, 638 P.2d 1280, 1283 (Wyo. 1982) ("The party proffering the testimony of a previously hypnotized witness may well be advised to fortify the credibility

An exceptionally strong commitment to the safeguard approach was evidenced in *State v. Hurd*.¹⁷⁴ *Hurd* involved the admissibility of testimony from an assault victim who was unable to identify the defendant as her attacker until she underwent hypnotic treatments. In *Hurd*, the New Jersey court expressly made compliance with the following standards a precondition for the admissibility of hypnotically induced recollection:

- (1) The hypnotic session should be conducted by a licensed psychiatrist or psychologist trained in the use of hypnosis.
- (2) The qualified professional conducting the hypnotic session should be independent of and not responsible to the prosecutor, investigator or the defense.
- (3) Any information given to the hypnotist by law enforcement personnel prior to the hypnotic session must be in written form so that subsequently the extent of the information the subject received from the hypnotist may be determined.
- (4) Before induction of hypnosis, the hypnotist should obtain from the subject a detailed description of the facts as the subject remembers them, carefully avoiding adding any new elements to the witness' description of the events.
- (5) All contacts between the hypnotist and the subject should be recorded so that a permanent record is available for comparison and study to establish that the witness has not received information or suggestion which might later be reported as having been first described by the subject during hypnosis. Videotape should be employed if possible, but should not be mandatory.
- (6) Only the hypnotist and the subject should be present during any phase of the hypnotic session, including the pre-hypnotic testing and post-hypnotic interview.¹⁷⁵

Further, the state must bear the burden of showing by clear and con-

of such witness by complying with some or all of [the *Hurd*] safeguards, but there are too many variables in hypnotism to mandate such requirements."

174. 173 N.J. Super. 333, 414 A.2d 291, *aff'd*, 86 N.J. 525, 432 A.2d 86 (1980).

175. *Id.* at 363, 414 A.2d at 306. Compliance with similar safeguards is statutorily mandated in Oregon. ORS 136.675 to .695 (1979). The Oregon model is praiseworthy for the reasons set forth in Comment, *Hypnosis—Its Role and Current Admissibility in the Criminal Law*, 17 WILLAMETTE L. REV. 665, 691-92 (1981). As the courts of some other jurisdictions, see, e.g., *infra* note 185-88 and accompanying text, have explained, however, such safeguards may be woefully inadequate. One might expect that the admissibility of hypnotically induced testimony will soon be governed by even more stringent standards in Oregon, where notwithstanding the questionable vitality of the *Frye* standard, the legislature has already demonstrated a willingness to face some of the difficult issues raised by hypnotically induced testimony. See *State v. Kesterling*, 50 Or. App. 461, 623 P.2d 1095 (1981) (rejecting *Frye*), *aff'd on other grounds*, 292 Or. 350, 638 P.2d 1145 (1982). But cf. *State v. Green*, 271 Or. 153, 531 P.2d 245 (1975) (holding polygraph evidence inadmissible).

vincing evidence that these standards have been complied with and that the testimony is otherwise reliable.¹⁷⁶ Noting that the standards had not all been observed, the *Hurd* court found that the State did not meet its burden of showing that there was no impermissibly suggestive or coercive conduct during the hypnotic session, or that under the totality of the circumstances the identification of the defendant was reasonable.¹⁷⁷

2. The "Incompetence" Approach

Other courts have considered an underlying question: Does the scientific community generally accept hypnosis as a process for refreshing recollection?¹⁷⁸ The California Supreme Court recently undertook a particularly extended examination of this question in *People v. Shirley*.¹⁷⁹ The California court ultimately found that hypnosis is not generally accepted for refreshing recollection, and held that "*the testimony of a witness who has undergone hypnosis for the purpose of restoring his memory of the events in issue is inadmissible as to all matters relating to those events from the time of the hypnotic session forward.*"¹⁸⁰

176. 173 N.J. Super. at 365, 414 A.2d at 306-07.

177. *Id.* at 366, 414 A.2d at 307-09. Having decided that under the reformulated *Frye* standard, see *supra* note 166-78 and accompanying text, hypnotically induced recollection is not admissible, the court reviewed the admissibility of the identification under the standards set forth by the United States Supreme Court in *United States v. Wade*, 388 U.S. 218 (1967), and *Neil v. Biggers*, 409 U.S. 188 (1972). See 173 N.J. Super. at 366, 414 A.2d at 305-06. To be sure, *Hurd* is a case in which the constitutional issues appear analytically inseparable from the question of reliability. See *supra* note 168; see also *State v. Long*, 32 Wash. App. 732, —, 694 P.2d 845, 847 (1982) ("[T]he improper hypnotic episode arranged by the prosecuting attorney and conducted by a police officer deprived the defendant of a material witness who cannot be rehabilitated.").

178. *E.g.*, *State v. La Mountain*, 125 Ariz. 547, 611 P.2d 551 (1980); *People v. Shirley*, 31 Cal. 3d 18, 641 P.2d 775, 181 Cal. Rptr. 243 (1982); *People v. Tait*, 99 Mich. App. 19, 297 N.W.2d 853 (1980).

179. 31 Cal. 3d 18, 641 P.2d 775, 181 Cal. Rptr. 243, *cert. denied*, 103 S. Ct. 13 (1982).

180. *Id.* at 66-67, 641 P.2d at 804, 181 Cal. Rptr. at 273 (emphasis added). The continued vitality of *Shirley*—indeed, of all California precedent that relies on *Frye*—is now questionable in light of the "Truth-in-Evidence" provision of California's "Victims' Bill of Rights" (Proposition 8), an initiative measure adopted by the state's voters in 1982. The truth-in-evidence provision reads as follows:

Right to Truth-In-Evidence. Except as provided by statute hereafter enacted by a two-thirds vote of the membership in each house of the Legislature, *relevant evidence shall not be excluded in any criminal proceeding*, including pretrial and post conviction motions and hearings, or in any trial or hearing of a juvenile for a criminal offense, whether heard in juvenile or adult court. Nothing in this section shall affect any existing statutory rule of evidence relating to privilege or hearsay, or Evi-

The California court began its analysis by observing that in all jurisdictions considering the matter, "statements made under hypnosis may not be introduced to prove the truth of the matter asserted because the reliability of such statements is questionable."¹⁸¹ Most of the cases so holding, the court noted, measured reliability under the *Frye* standard.

Next, the court surveyed cases from American jurisdictions that considered the admissibility of hypnotically induced testimony, noting particularly the initial willingness to admit the testimony as refreshed recollection.¹⁸² The court also noted the developing skepticism evident in the "increasingly complex procedural 'safeguards'" approach.¹⁸³ The California court, however, found the safeguards inadequate:

[V]irtually all of those rules are designed to prevent the hypnotist from exploiting the suggestibility of the subject; none will directly avoid the additional risks, recognized elsewhere in *Hurd*, that the subject (1) will lose his critical judgment and begin to credit "memories" that were formerly viewed as unreliable, (2) will confuse actual recall with confabulation and will be unable to distinguish between the two, and (3) will exhibit an unwarranted confidence in the validity of his ensuing recollection.¹⁸⁴

Contrasting these two groups of older cases with those in which

dence Code, Sections 352, 782 or 1103. Nothing in this section shall affect any existing statutory or constitutional right of the press.

Cal. Const. art I, § 28 (emphasis added). The provision appears to repeal, among other things, the *Frye* standard, to which the California courts previously strictly adhered, *see, e.g.*, *People v. Kelly*, 17 Cal. 3d 24, 549 P.2d 1240, 130 Cal. Rptr. 144 (1976); *but see People v. Marx*, 54 Cal. App. 3d 100, 126 Cal. Rptr. 350 (1975), and, in effect, substitute therefor McCormick's "pure relevancy" test, discussed *supra* note 5. *See Uelmen, Prop. 8 Casts Uncertainty Over Vast Areas of Criminal Law*, CAL. LAW., July-Aug. 1982, at 43, 45. Although Proposition 8 has already withstood a general challenge, *see Brosnahan v. Brown*, 32 Cal. 3d 236, 651 P.2d 274, 186 Cal. Rptr. 30 (1982), the impact of its several provisions, including the truth-in-evidence amendment to the state constitution, must be determined ultimately by the courts.

181. *Id.* at 33, 641 P.2d at 783, 181 Cal. Rptr. at 251 (citing *People v. Blair*, 25 Cal. 3d 640, 602 P.2d 738, 159 Cal. Rptr. 818 (1979); *Greenfield v. Commonwealth*, 214 Va. 710, 204 S.E. 2d 414 (1974)).

182. 31 Cal. 3d at 35-36, 641 P.2d at 784-85, 181 Cal. Rptr. at 252-53 (citing *Kline; Wyler*; *Harding v. State*, 5 Md. App. 302, 246 A.2d 320 (1968) ("seminal case")).

183. 31 Cal. 3d at 36-37, 641 P.2d at 785, 181 Cal. Rptr. at 253 (citing *Adams*; *State v. Hurd*, 86 N.J. 525, 432 A.2d 86 (1981)).

184. 31 Cal. 3d at 39, 641 P.2d at 787, 181 Cal. Rptr. at 255. *Contra*, *Falk*, *supra* note 168, at 52. The court added: "[E]ven if requirements could be devised that were adequate in theory, we have great doubts that they could be administered in practice without injecting undue delay and confusion into the judicial process." *Id.*, 641 P.2d at 787, 181 Cal. Rptr. at 255.

courts perceived a threshold question about the reliability of hypnosis, the court gave renewed significance to its earlier observation that out-of-court hypnotic declarations are unreliable and inadmissible under *Frye*.¹⁸⁵ Specifically, the California court found the newer decisions persuasive for their recognition that hypnosis is not like "any other method" of refreshing recollection.¹⁸⁶ Hypnosis can create as well as refresh memories. Hypnosis can also instill in a subject an abiding belief in his posthypnotic recall. Hypnosis renders it impossible for anyone to distinguish between truly refreshed memories and wholly created memories. Therefore, "the resulting recall of the witness 'is dependent upon, and *cannot be disassociated from*' the underlying hypnosis And if the testimony is thus only as reliable as the hypnotic process itself, it must be judged by the same standards of admissibility."¹⁸⁷ The shortcomings of hypnosis, noted by the court in support of its conclusion that the *Frye* test must be applied to hypnotically refreshed recall, also served to support the court's conclusion that hypnotically refreshed recall does not meet the *Frye* test:

[W]e have reviewed numerous scientific treatises and articles in scholarly journals. From this review it clearly appears that major voices in the scientific community oppose the use of hypnosis to restore the memory of potential witnesses, with or without procedural safeguards, on the ground of its intrinsic unreliability. This unreliability is due both to certain properties of human memory and to factors inherent in the nature of hypnosis.¹⁸⁸

In summarizing the findings of scientific experts, the court explained that the proponents of the hypnotic recall technique predicate their position on three highly questionable premises: (1) that the human memory faithfully records what is perceived, (2) that the human memory permanently stores these perceptions, and (3) that hypnosis effects an accurate "replay" of these perceptions.¹⁸⁹ Rather, the human memory is dynamic and subject to "condensation, elabora-

185. *Id.* at 40-51, 641 P.2d at 787-94, 181 Cal. Rptr. at 256-63 (citing *State v. Mena*, 128 Ariz. 226, 624 P.2d 1274 (1981); *State v. La Mountain*, 125 Ariz. 547, 611 P.2d 551 (1980); *Polk v. State*, 46 Md. App. 382, 427 A.2d 1041 (1981); *People v. Tait*, 99 Mich. App. 19, 297 N.W.2d 853 (1980); *State v. Mack*, 292 N.W.2d 764 (Minn. 1980); *Commonwealth v. Nazarovitch*, 496 Pa. 97, 436 A.2d 170 (1981)).

186. 31 Cal. 3d at 53, 641 P.2d at 795, 181 Cal. Rptr. at 264.

187. *Id.* at 53, 641 P.2d at 795-96, 181 Cal. Rptr. at 264 (citations omitted) (emphasis added) (quoting *Polk v. State*, 48 Md. App. at 382, 427 A.2d at 1048).

188. 31 Cal. 3d at 56, 641 P.2d at 797-98, 181 Cal. Rptr. at 266 (footnote omitted).

189. *Id.* at 57, 641 P.2d at 798, 181 Cal. Rptr. at 266 (citing M. REISER, *HANDBOOK OF INVESTIGATIVE HYPNOSIS* ch. 40 (1980); Reiser, *Hypnosis as a Tool in Criminal Investigation*,

tion, and invention" from the moment of perception,¹⁹⁰ throughout the "storage" or "retention interval" period,¹⁹¹ and especially while recall stimulation is attempted during hypnosis.¹⁹² On this latter point, the court made four telling observations:

(1) A hypnotic subject is highly vulnerable to even the slightest, otherwise imperceptible, suggestion.¹⁹³

(2) A hypnotic subject experiences a compelling desire to reproduce the responses that he believes are expected of him and will "recall" accordingly, being unwilling to admit that his memory is uncertain, incomplete, or not at all existent.¹⁹⁴

(3) No one can distinguish between true memories and those influenced to any degree by the hypnosis—not the hypnotist or the subject, not a judge or a jury.¹⁹⁵

(4) Indeed, because the pressures that are brought to bear on a hypnotic subject encourage the confident recitation of thorough, complete, detailed, coherent recollection, none of these qualities—the presence of which could ordinarily be relied upon by a trier of fact in assessing a witness' credibility and the absence of which could be exploited on cross-examination by an adverse counsel—are meaningful criteria by which to evaluate the reliability of a previously hypnotized witness' testimony.¹⁹⁶

The California rule on hypnotically enhanced testimony is the

THE POLICE CHIEF 36, 40 (Nov. 1976); Reiser, *Hypnosis as an Aid in a Homicide Investigation*, 17 AM. J. CLINICAL HYPNOSIS 84, 85 (1974)).

190. 31 Cal. 3d at 61 n.39, 641 P.2d at 801 n.39, 181 Cal. Rptr. at 269 n.39 (referring to research of Dr. Elizabeth F. Loftus, *infra* note 191).

191. *Id.* at 57-61, 641 P.2d at 798-801, 181 Cal. Rptr. at 266-69 (citing F. BARTLETT, REMEMBERING (1932, reprint 1964); D. HINTZMAN, THE PSYCHOLOGY OF LEARNING AND MEMORY 298 (1978); E. LOFTUS, EYEWITNESS TESTIMONY (1979); Loftus & Loftus, *On the Permanence of Stored Information in the Human Brain*, 35 AM. PSYCHOLOGIST 409 (1980); O'Connell, Shor, & Orne, *Hypnotic Age Regression: An Empirical and Methodological Analysis*, 76 J. ABNORMAL PSYCHOLOGY (monograph supp. pt. 2) (1970)).

192. 31 Cal. 3d at 61-67, 641 P.2d at 800-04, 181 Cal. Rptr. 269-72 (citing *inter alia* Diamond, *Inherent Problems in the Use of Pretrial Hypnosis on a Prospective Witness*, 68 CALIF. L. REV. 313 (1980); Orne, *The Use and Misuse of Hypnosis in Court*, 27 INT'L J. CLINICAL & EXPERIMENTAL HYPNOSIS 311 (1979). Dr. Diamond's article contains a survey of pertinent legal literature. Diamond, *supra*, at 327-32.

193. 31 Cal. 3d at 63-64, 641 P.2d at 802, 181 Cal. Rptr. at 271 (citing *inter alia* Diamond, *supra* note 192, at 333; Orne, *supra* note 192, at 322-27).

194. 31 Cal. 3d at 64, 641 P.2d at 802-03, 181 Cal. Rptr. at 271 (citing *inter alia* Diamond, *supra* note 192, at 337-38; Orne, *supra* note 192, at 316-20).

195. 31 Cal. 3d at 65, 641 P.2d at 803, 181 Cal. Rptr. at 271-72 (citing *inter alia* Diamond, *supra* note 192, at 333-35, 337-38; Orne, *supra* note 192, at 317-18, 320).

196. 31 Cal. 3d at 65, 641 P.2d at 803-04, 181 Cal. Rptr. at 272 (citing *inter alia* Diamond, *supra* note 192, at 333-35, 337-38, 339-40; Orne, *supra* note 192, at 317-18, 320, 327, 332).

most exclusionary among American jurisdictions, but is not as broad as it could have been. For example, though the court established an evidentiary rule that excludes testimony from a category of individuals, such as, in the nature of a rule of incompetence, the court took care to explain that even previously hypnotized witnesses would be permitted to testify to matters "*wholly unrelated*" to those explored during hypnosis.¹⁹⁷ An additional limitation is that the rule does not apply to defendants; even a previously hypnotized defendant may, as a matter of constitutional right, testify on his own behalf.¹⁹⁸ Furthermore, the erroneous admission of hypnotically induced testimony is not per se prejudicial; if the error is found harmless, the conviction will be affirmed.¹⁹⁹ More obviously, there being no inherent violation of the defendant's constitutional rights in the mere use of hypnosis on potential prosecution witnesses, evidence derived through hypnosis "is not ipso facto . . . inadmissible."²⁰⁰ On a closely related matter, the court stated: "[W]e do not undertake to foreclose the continued use of hypnosis by the police for purely investigative purposes."²⁰¹

Precisely because the rule would nevertheless discourage the investigative use of hypnosis, other courts that substantially agree with the California court's analysis have established a modified rule of admissibility.

3. *The Compromise Approach*

In cases decided before the California Supreme Court's decision in *Shirley*, the courts of Arizona²⁰² and Michigan²⁰³ held post-

197. 31 Cal. 3d at 67, 641 P.2d at 805, 181 Cal. Rptr. at 273.

198. *Id.* (citing *People v. Robles*, 2 Cal. 3d 205, 466 P.2d 710, 85 Cal. Rptr. 166 (1970)). One justice, though believing that the court had established an unnecessarily restrictive rule of exclusion, deemed it inappropriate, in light of the court's reasoning, to give favored status to defendants. 31 Cal. 3d at 77-78, 641 P.2d at 811, 181 Cal. Rptr. at 279-80 (Kaus, J., concurring and dissenting).

199. 31 Cal. 3d at 68, 641 P.2d at 805-06, 181 Cal. Rptr. at 274.

200. *Id.* at 68, 641 P.2d at 805, 181 Cal. Rptr. at 274. Moreover, the court indicated that on the remand of *Shirley*, since the victim is now "unavailable," her prehypnotic statements at the preliminary hearing, a proceeding at which the defendant had the right, opportunity, interest, and motive to cross-examine her, would be admissible, under California's former-testimony exception to the hearsay rule, CAL. EVID. CODE § 1291(a) (West 1966). *Id.* at 72, 641 P.2d at 808, 181 Cal. Rptr. at 276. See generally FED. R. EVID. 806(b)(1).

201. 31 Cal. 3d at 67, 641 P.2d at 805, 181 Cal. Rptr. at 273. See generally *State v. Poland*, 132 Ariz. 269, 645 P.2d 784 (1982) (hypnotically adduced statements, properly corroborated, may be used to find probable cause for issuance of search warrant).

202. *State v. Mena*, 128 Ariz. 226, 232, 624 P.2d 1274, 1280 (1981) ("[T]estimony from witnesses who have been questioned under hypnosis regarding the subject of their offered testi-

hypnotic testimony to be inadmissible per se. Both courts have since retreated from that rule and now permit a previously hypnotized witness "to testify with regard to those matters which he or she was able to recall *and* relate prior to hypnosis."²⁰⁴ Otherwise, post-hypnotic testimony, to the extent that it bears on matter explored during hypnosis, is inadmissible. This rule has also been followed in Maryland,²⁰⁵ Minnesota,²⁰⁶ Nebraska,²⁰⁷ New York,²⁰⁸ and

mony [is] inadmissible in criminal trials from the time of the hypnotic session forward") (footnote omitted). In *Mena*, the court recognized that the rule stated was more broad sweeping than necessary to reaffirm its decision one year earlier in *State v. LaMountain*, 125 Ariz. 547, 611 P.2d 551 (1980). In *La Mountain*, the court had held that it was error "to admit testimony which may have been developed as a result of hypnosis." *Id.* at 551, 611 P.2d at 555 (emphasis added). Thus, the question left open in *La Mountain*, whether witnesses hypnotized before trial would be permitted to testify as to matters recalled prior to hypnosis, was answered in the negative because, in the court's view, "it will often be difficult to determine whether proffered testimony has been produced by hypnosis or has come from the witness' own memory, unaffected by hypnotic suggestion." *Mena*, 128 Ariz. at 232, 624 P.2d at 1280. Indeed, the court felt that the broad incompetence approach was necessary "to ensure against the dangers of hypnosis." *Id.*, 624 P.2d at 1280. A predicate to the court's decision, lacking in the decisions of those courts that freely admit such testimony as refreshed recollection and even most of those that require compliance with safeguards, was a finding that hypnotic memory enhancement has not gained general scientific acceptance. *Id.* at 232, 624 P.2d at 1279 (citing *Scales v. City Court of City of Mesa*, 122 Ariz. 231, 594 P.2d 97 (1979) (adopting *Frye*)).

203. *People v. Tait*, 99 Mich. App. 19, 297 N.W.2d 853 (1980) (citing *People v. Hangsleben*, 86 Mich. App. 718, 273 N.W.2d 539 (1978)). In *Tait*, the court reversed the conviction of a defendant at whose trial a hypnotically refreshed witness was permitted to testify. However, "*Tait* is unclear as to the intended scope of its holding." *People v. Gonzales*, 108 Mich. App. 145, 151, 310 N.W.2d 306, 309 (1981). The court in *Tait* suggested three bases for its holding: (1) Defendant was not advised of the hypnosis until the day of trial. (2) The court denied the defense counsel the opportunity to make the jury aware of all the underlying facts of the witness' changed testimony. (3) "Hypnosis has not 'achieved that degree of general scientific acceptance' which will permit its introduction." 99 Mich. App. at 28, 297 N.W.2d at 856-57. In *Gonzales*, the court relied on *Tait* principally for the last point.

204. *State ex rel. Collins v. Superior Court*, 132 Ariz. 180, 209 644 P.2d 1266, 1295 (1982) (supplemental opinion); accord, *People v. Gonzales*, 108 Mich. App. 145, —, 310 N.W.2d 306, 314 (1981) ("[W]e hold that hypnosis as a technique to enhance memory recall has not received sufficient scientific recognition of reliability to allow the post-hypnotic 'recollections' of witnesses to be introduced into evidence . . ."; *State v. Wallach*, 110 Mich. App. 37, 72, 312 N.W.2d 387, 404 (1981) ("Under our holding in *Gonzales*, a witness who had been hypnotized would not necessarily be precluded from testifying. Said witness could testify about those aspects of the case remembered prior to undergoing hypnosis."). The rule of *Collins* was extended to civil cases in Arizona in *Lemieux v. Superior Court*, 132 Ariz. 214, 644 P.2d 1300 (1982) (opinion and supplemental opinion).

205. See *Collins v. State*, 52 Md. App. 186, —, 447 A.2d 1272, 1283 (citing *State ex rel. Collins v. Superior Court* (Ariz.) with apparent approval); *Polk v. State*, 48 Md. App. 382, —, 427 A.2d 1041, 1048 (1981) ("The reliability of the [hypnosis] technique must be demonstrated before testimony based upon it can be received." (emphasis added)).

206. See *State v. Blanchard*, 315 N.W.2d 427, 430-31 (Minn. 1982) ("[A] hypnotically influenced witness must not be allowed to testify in a criminal proceeding concerning matters he or she remembers under hypnosis." (emphasis added); prehypnotic recollections admissi-

Pennsylvania.²⁰⁹

Underlying the compromise approach, and expressly revealed by the Arizona Supreme Court, is the following rationale:

As a practical matter, if we are to maintain the rule of incompetency, the police will seldom dare to use hypnosis as an investigatory tool because they will thereby risk making the witness incompetent if it is later determined that the testimony of that witness is essential. Thus, applying the *Frye* test of general acceptance and weighing the benefit against the risk, we modify our previous decision.²¹⁰

To ensure that witnesses testify only to the extent of their prehypnotic recall, the Arizona court required that a record be maintained of the witness' prehypnotic recall and recommended that some or all of the safeguards developed in the case law²¹¹ also be observed.²¹² Also, when a litigant intends to call a previously hypnotized witness, he must give timely notice.²¹³

This approach—a compromise, to be sure—exhibits both the

ble); *State v. Koehler*, 312 N.W.2d 108, 110 (Minn. 1981) (case remanded; witness "may not testify to matters adduced at the pretrial hypnotic interview except as such matters were previously and unequivocally disclosed by him to the authorities, prior to hypnosis."); *See also State v. Mack*, 292 N.W.2d 764 (Minn. 1980).

207. *See State v. Palmer*, 210 Neb. 206, 218, 313 N.W.2d 648, 655 (1981) (case remanded; "testimony of the witness as to [the subject matter adduced at the pretrial hypnotic interview] is inadmissible. Testimony as to other subjects may or may not be admissible."); *id.* (Clinton, J., concurring) ("If . . . on remand it can be reliably determined what the witness . . . remembered previous to and independently of the hypnotic session, then that testimony, in my judgment, would be admissible.").

208. *People v. Hughes*, 88 A.D.2d 17, 22, 452 N.Y.S.2d 929, 932 (1982) ("Although on retrial the hypnotically produced testimony must be excluded, it does not follow that the fact that [the witness] has undergone hypnosis makes her incompetent as a witness or renders inadmissible her testimony to facts which she was able to recall prior to the first hypnotic procedure." (citing *State ex rel. Collins v. Superior Court*)), *appeal granted*, 57 N.Y.2d 778, 440 N.E.2d 1348, 454 N.Y.S.2d [No. 8] LXXXIX (1982).

209. *See Commonwealth v. Nazarovitch*, 496 Pa. 97, 111, 496 A.2d 170, 178 (1981) ("[W]e will not permit the introduction of hypnotically-refreshed testimony until we are presented with more conclusive proof than has been offered to date of the reliability of hypnotically-retrieved memory."); *Commonwealth v. Taylor*, 294 Pa. Super. 171, 177, 439 A.2d 805, 808 (1982) ("It is clear that the victim was able to positively identify both of her assailants prior to the hypnotic session. Therefore, with respect to the victim's ability to identify her two assailants, the hypnotic session did not, in fact, refresh her memory and the dangers of unreliable suggestion, fantasy and confabulation are not at issue."); *see also Commonwealth v. McCabe*, — Pa. Super. —, 449 A.2d 670 (1982).

210. *State ex rel. Collins v. Superior Court*, 132 Ariz. 180, 209, 644 P.2d 1266, 1295 (supplemental opinion).

211. *See supra* text accompanying note 176.

212. 132 Ariz. at 210, 644 P.2d at 1295 (supplemental opinion).

213. *Id.* at 210, 644 P.2d at 1296 (supplemental opinion).

strengths and weaknesses of a compromise. The "risks" of following the per se incompetence approach would seem acute, according to the Arizona court, in a rape prosecution. "No valid public policy" would be served by prohibiting a rape victim from testifying to the fact of the event, the lack of consent, or the extent of any injuries, assuming the victim was able to relate these events before hypnosis.²¹⁴ No doubt, even if each of the elements of the crime could technically be established by independent evidence, the absence of any testimony from the alleged victim might raise exaggerated doubts in the minds of jury members. The "risks," however, of following the compromise approach flow from ignoring the logical imperative of the reasoning of the cases. Indeed, if hypnosis "cements" certain perceptions in the subject's mind, the cross-examination of the witness after hypnosis is not the same opportunity it would have been before hypnosis. This is true no matter how much care is exercised by all concerned to limit the substance of the testimony to that recalled and related prior to hypnosis. This was the principal feature of the compromise approach that disturbed a member of the Arizona court. Additionally, the justice was concerned that a witness would be required to testify to facts that he does not presently believe, and would be "coached" to that effect by the attorney calling him, possibly in violation of the attorney's ethical standards proscribing his participation in the perpetuation of "known" falsehoods.²¹⁵

214. *Id.* at 209, 644 P.2d at 1295 (supplemental opinion).

215. *Id.* at 211-12, 644 P.2d at 1297-98 (supplemental opinion) (Gordon, V.C.J., specially concurring in part and dissenting in part) (citing MODEL CODE OF PROFESSIONAL RESPONSIBILITY DR 7-102). DR 7-102 reads in relevant part:

DR 7-120. Representing a Client Within the Bounds of the Law

(A) In his representation of a client, a lawyer shall not:

- (4) Knowingly use perjured testimony or false evidence.
- (5) Knowingly make a false statement of law or fact.
- (6) Participate in the creation or preservation of evidence when he knows or it is obvious that the evidence is false.

Because the Supreme Court of California found Vice Chief Justice Gordon's objections to the compromise approach persuasive, it adhered in *People v. Shirley*, 181 Cal. 3d at 48 n.29, 641 P.2d at 792, 181 Cal. Rptr. at 260, to the incompetence approach. Vice Chief Justice Gordon, in turn, concurred with the California Supreme Court's conclusion regarding hypnotically induced testimony, "the game is not worth the candle." *State ex. rel. Collins v. Superior Court*, 132 Ariz. at 208, 644 P.2d at 1299 (specially concurring and dissenting in part) (citing *People v. Shirley*, 31 Cal. 3d at 40, 641 P.2d at 787, 181 Cal. Rptr. at 256).

III. RECOMMITMENT TO THE *Frye* STANDARD AND THE FUTURE OF HYPNOTICALLY INDUCED TESTIMONY

The cases discussed throughout Part I of this Article demonstrate that the Ninth Circuit is, on the whole, committed to the *Frye* standard. The cases discussed in Part II, in which the court admitted hypnotically induced testimony as another variety of refreshed recollection, and without regard to its reliability, can only be regarded as unfortunate aberrations. One could expect that, at its earliest opportunity, the court will recognize that hypnotically induced recall "is dependent upon and cannot be disassociated from" the hypnotic process itself²¹⁶ and adopt a new approach to this form of evidence, one more consistent with the court's traditional commitment to the *Frye* standard.

It seems unlikely that the Ninth Circuit will adopt the safeguard approach. The safeguards neither are directed to the concerns of the *Frye* test²¹⁷ nor suffice for the limited task to which they have most commonly been directed.²¹⁸ The incompetence approach is appealing for its logic,²¹⁹ but suffers a serious practical shortcoming: legitimate and potentially valuable investigative efforts would be discouraged for little corresponding social benefit.²²⁰ Indeed, effective law enforcement can often seem at odds with the court's interest in making certain that only reliable evidence is admitted, but the compromise approach accommodates both values with a rational

216. See *supra* note 188 and accompanying text.

217. See *supra* note 185 and accompanying text.

218. In *Shirley*, the California Supreme Court observed:

[W]e are not persuaded that the requirements adopted in *Hurd* and other cases will in fact forestall each of the dangers at which they are directed.

For example, one of the requirements set forth in *Hurd* is that all contacts between the hypnotist and the subject must be recorded, for the stated purpose of enabling the trial court to determine what "cues" the hypnotist may have conveyed to the subject by word or deed; and the opinion strongly encouraged the use of videotape to make such recording. . . .

Yet as the same opinion recognizes elsewhere . . . , "Because of the unpredictability of what will influence a subject, it is difficult even for an expert examining a videotape of a hypnotic session to identify possible cues." If even an expert cannot confidently make that identification, it is vain to believe that a layman such as a trial judge can do so.

31 Cal. 3d at 39 & n.24, 641 P.2d at 787 & n.24, 181 Cal. Rptr. at 255 & n.24 (citations omitted). See *supra* note 174.

219. See *supra* notes 214-15 and accompanying text.

220. See *supra* note 210 and accompanying text.

and workable model for the admission of hypnotically induced testimony.

While some have identified difficulties with the compromise approach,²²¹ these difficulties may well be more imagined than real. As long as the prosecution and police recognize that hypnosis should be resorted to only as a matter of necessity, truly essential testimony rarely will be "lost." If the witness has no recall at all, then nothing could be offered through that witness at trial anyway. If there is little recall, the witness' testimony likely will still be of little or no value to the prosecution's case-in-chief. If the witness' unenhanced recall is largely intact, hypnosis should not be used and the prosecution will not be restricted in its direct examination of that witness. If at any point it appears that hypnosis was induced improperly "to clothe the witness's entire testimony in an artificial but impenetrable aura of certainty,"²²² the witness could be prohibited absolutely from testifying. Interestingly, the safeguards are particularly well suited to avoiding and discouraging this form of misconduct.

Moreover, even if those cases in which hypnosis was reasonably undertaken, but at trial some portion of the witness' prehypnotic recall unexpectedly becomes critical to the prosecution's case, the problems are manageable. At the outset, it should be noted that the compromise approach entails no reformulation of the legal profession's prevailing ethical standards.²²³ Accordingly, a witness who has undergone pretrial hypnosis will be permitted to testify to matters that he was able to relate and recall prior to hypnosis, but his testimony must not be inconsistent with his present beliefs. That is, his testimony would only be an incomplete version of the facts as he presently remembers them. No court, it can be assumed, will permit the elicitation of direct testimony that the proponent or the witness knows or believes to be false.²²⁴ To the extent that a witness' present testimony is not inconsistent with his present beliefs, meaningful cross-examination will also be possible, though not without some difficulties.²²⁵

221. See, e.g., *supra* note 215 and accompanying text.

222. *People v. Shirley*, 31 Cal. 3d at 69, 641 P.2d at 806, 181 Cal. Rptr. at 274.

223. *But see supra* note 215 and accompanying text.

224. *Id.*

225. *Id.*

CONCLUSION

The *Frye* standard represents the best reasoned, if somewhat cautious, approach to determining the admissibility of novel scientific evidence. The vast majority of Ninth Circuit cases reviewing the admissibility of such evidence confirm that court's commitment to this view. In certain cases, however, evidence may be offered, the exclusion of which—under any standard and for any reason—may appear to work a hardship, even an injustice. Perhaps this explains the Ninth Circuit's prior reluctance to apply the *Frye* standard to hypnotically induced testimony. Yet the Ninth Circuit will likely reaffirm its commitment to *Frye* for the same cogent reasons most courts have found convincing. In the Ninth Circuit, the future promises the exclusion of novel scientific evidence until the theoretical basis of and procedure for procuring such evidence is accepted by the relevant scientific community.